DOCTOR OF EDUCATION (EDD)

Using Gal'perin's theory to enhance the educated discourse for learning: an action research study in the context of secondary school Year 9 English essay writing

Roberts, Miranda

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Miranda Lucy Roberts

A thesis submitted for the degree of Doctor of Philosophy,

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Candidate's signature: Miranda L Roberts

Declaration of Authorship

I am the author of this thesis, and the work described therein was carried out by myself personally.

Candidate's signature: [redacted]

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ACKNOWLEDGEMENTS

My PhD has been six years in the making and there are many people who have supported and helped me in my PhD journey, and I thank all of you.

Firstly, I would like to thank Professor Chris James at University of Bath who, after I had completed my Master's degree, asked me to think about doing a PhD. That was reinforced by my sister, Sonia, and her husband Bill, who encouraged that idea, during a long walk and talk one sunny October weekend in Cambridgeshire – Thank you.

Thank you to my Headteacher, who actively enabled me to conduct the research in our school and the staff and students who participated and shaped this research with me. I also want to thank all the other staff in this learning community who supported my PhD process with information and details I needed and those who listened to me explain it, yet again!

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ABSTRACT

Title of Thesis:

"Using Gal'perin's theory to enhance the educated discourse for learning: an action research study in the context of secondary school Year 9 English essay writing".

Student name:

Miranda Lucy Roberts

Abstract

Many researchers attest to how Gal'perin's theory of the systematic formation of actions and concepts illuminates the process of learning and student meta-cognition (Arievitch, I.M., 2020; Lund and Engeness, 2020; Engeness, 2021) and the self-regulated learner (Arievitch and Haenen, 2005) but there have been no reported practising teacher action research studies in secondary schools, nor studies that apply this approach to complex creative tasks such as essay writing. Common pedagogical tools to support essay writing, such as scaffolds, rest on unsophisticated conceptions of learning, like Bloom's Taxonomy (Anderson, 2001) reducing learning to content knowledge (Arievitch, I.M., 2020) and disregarding collaborative Vygotskian problem-solving approaches. Gal'perin developed Vygotsky's cultural-historical theory into a practical technology of instruction (Haenen, 1996), separating the content of an action into the orientating part and the executive part. By orientating the student to the properties and tools of the action, a holistic picture of the executive action is evident to the student and 'serves as an explanation of the whole process' (Gal'perin, P., 1992 (1978), p.59). My research investigates how Gal'perin's theory contributes to the development of meta-cognition of essay writing skills and the associated educated discourse.

As a practising secondary school teacher in the UK, I conducted action research within a class of 23 Year 9 students. I followed this with an in-depth analysis of the process in three individual case studies and found evidence of developed essay writing skills, educated discourse and improved meta-cognition. My findings indicate that collaborative, reverse modelling techniques along with an emphasis on Overt Speech supports not only students' meta-cognition, but their agency in the classroom.

LIST OF ABBREVIATIONS

Acronym	List of Abbreviations
AR	Action Research
ATL	Attitude Towards Learning
BBC	British Broadcasting Service
ECAT	Essay Criteria Assessment Tool
EAL	English as an Additional Language
EGT	End Grade Target
GCSE	General Certificate of Secondary Education
GP	General Progress Grade
KS2	Key Stage Two (Years 3, 4, 5 and 6 at Primary School)
KS3	Key Stage Three (Years 7, 8 and 9 at secondary school)
KS4	Key Stage Four (Years 10 and 11 at secondary school)
OBA	Orientating Basis of an Action
OFSTED	Office for Standards in Education, Children's Services and Skills
PAR	Participatory Action Research
PEE	Point, Evidence, Explanation (sections used for a paragraph)
POV	Point of View
PP	Pupil Premium
SAT	Standard Assessment Tests
SCOBA	Scheme of Complete Orientating Basis of an Action
SEN	Special Educational Needs
SWP 1	Stepwise Procedure one
SWP 2	Stepwise Procedure two
SV CLP	SV is a pseudonym for the group of schools and CLP is Community Learning Partnership
WRAT	Wide Range Assessment Test
WS school	The pseudonym for the secondary school within which I worked
ZPD	Zone of Proximal Development

1 CONTEXT CHAPTER

In this chapter I will be giving an overview of the journey I took to develop my research project and a little about my background in education. I will then describe the location of the research, including the school with its priorities, projects and ethos. I will make special mention of a series of projects and events that sparked the idea for my PhD research. Finally, I will give some explanation of how I developed a focus for my research and the class I chose within which to conduct that research.

I trained to be a teacher in 2002/2003 on an English Secondary PGCE at Bath Spa University and subsequently got a job in a secondary school, in a country town in Somerset. I will refer to this school as WS School. I worked in this school from 2003 – 2019 as a classroom teacher in the department of English and English Literature. I had some extra school-wide responsibilities, to which I refer to later in this chapter. I had completed an MA in Education at University of Bath in 2011 and was keen to identify an opportunity for a PhD research project that would fit in with WS School priorities.

1.1 LOCATION

In 2016 / 2017, the year of my data collection, WS Secondary School had a student population of 545 students. WS School converted to an academy in 2011 and the 2013 Ofsted inspection, judged WS School as 'Good'. The 2015 exam results achieved 54% 5+ A*– C (A* was the highest grade that could be achieved at GCSE level and C was the average pass grade) in GCSEs, including English and Maths, with 71% attaining three levels progress in English and 69% attained three levels progress in Maths. Within the School and College performance tables, based on similar school groups according to prior attainment of pupils, and comparing best results rather than first results, WS School came out in the top four. The gap between Pupil Premium students and non-PP students was 46 in 2014 and 19 in 2015, while the national average was 26, showing that this school was continuing to improve results for its students; its students made good progress. Attendance data was 95.1% for 2015-2016 compared to National average of 94.8%.

In 2017, the British Government changed the GCSE assessment criterion and grading system from 'A* - F' to '9 – 1'. Previously a student needed to attain a grade C to pass any GCSE subject; now a grade 4 was considered a low pass and grade 5 an upper pass.

The Government also changed the school attainment tables from the percentage of students in a school who achieved five GCSE passes, A* - C, including English and Maths to a more complicated value added measure called Progress 8. Progress 8 is a value added metrically calculated score showing how much progress students make, during their secondary schooling, in eight selected subjects; there were three categories of subjects: English and Maths; Sciences, humanities and languages; other subjects. A school's Progress 8 score was calculated as the average of its students' Progress 8 score. It was supposed to give an indication of whether students in the school made above, below, or average progress compared to similar students in other schools (NAHT, 2016). Under the Progress 8 criterion, a school needed to get a score of 0 to show each student was making good progress and a positive score showed students were making better than average progress, the average being a nationally calculated average for that academic year.

In September 2013, BBC News reported that according to Ofsted '44% of Somerset's secondary schools were not yet good' (Claeys, Kempton and Paterson, 2014, p.31). In order to foster school improvements, the Government urged Somerset, amongst other regions, to look at the success of London schools. The London Challenge initiative, which spanned 2003-2008, had 'moved London from being the worst performing region to best performing region [within those five years]' (Claeys, Kempton and Paterson, 2014, p.4). London saw 'secondary school students adding at least half a grade more progress in all subject areas compared to schools across the lowest performing regions' (Claeys, Kempton and Paterson, 2014, p.11). This success produced much interest in 'narrowing the gap' (Claeys, Kempton and Paterson, 2014, p.6) in education performance between London and other poorer performing regions. As a result of the London Challenge initiative, other areas in the country took 'inspiration from London Challenge's methods and approach' and were 'supported by current or recently serving head teachers'(Claeys, Kempton and Paterson, 2014, p.24) from London to develop their own improvement strategies (Woods, 2014). Thus, the Somerset Challenge was born.

Somerset Challenge was supported by Somerset County Council, but developed as a bottom-up initiative 'a practitioner led collaborative partnership of schools' (Claeys, Kempton and Paterson, 2014, p.24). The main aims of Somerset Challenge were to close attainment gaps, with a particular focus on transition between phases of learning; to achieve better student outcomes; to increase

the proportion of good and outstanding schools; to secure system-wide transformation by school leaders (Compact, 2014).

In response to this challenge, some head teachers, in Somerset, initiated an idea called: *The Progression Project and The Somerset Learner*. This idea was that a student could learn at any school and transfer to any school in Somerset and have the same quality of learning; all schools would have similar expectations, enabling students to be able to make continued and streamlined progress. *The Progression Project* then challenged soft-linked groups of schools or school families, such as secondary schools and their associated primary schools or groups of schools in various geographical areas within Somerset, to take up and develop the idea for themselves in practitioner-led projects or action research. They hoped that the school groupings would develop and refine their ideas into specific projects, so that what was achieved could then be replicated in other groups of schools across the county and further afield (Claeys, Kempton and Paterson, 2014).

SV Community Learning Partnership, CLP, was one of those groups in Somerset. SV CLP is the pseudonym for this group of schools. It consisted, during the academic year 2016-2017, of one secondary [with year groups from 7 – 11, that is ages 11 – 16 years old], one junior, four primary and two infant schools with approximately 1,690 pupils overall. These eight head teachers took the concepts of *The Progression Project and The Somerset Learner* and conceived an improvement plan that they entitled: '*Stopping the Transition Drift: developing a common language to improve progress at transition'*. The main aim of this collaboration was to develop a common language for learning across all key stages in SV CLP so that students found the same language at transition points whether internal or external, as in, to another school. In order to ensure the implementation of the project, I, being one of the current teachers of SV CLP, was subsequently appointed by them and given the role of Language for Learning Leader. This role and my participation in the development of the project, eventually led to this piece action research within WS secondary school.

Initially, *The Progression Project*, which I undertook for SV CLP, explored how Bloom's Taxonomy (Anderson, 2001)could be implemented and developed as a language for learning across all key stages within SV CLP. Krathwohl (2001) notes that Bloom first created the taxonomy to be a 'common Language about learning goals to facilitate communication across persons, subject matter and grade levels' (Krathwohl, 2002, p.8). Many of the teachers within the CLP were aware of Blooms' Taxonomy and used it in their classroom teaching. 'The teachers saw their students as more successful learners as a result [of using Bloom's]' (Nobel, 2004, p.209). Since it was a

language that most teachers used, to an extent within the classroom; the Headteachers of SV CLP asked me to make that the focus of *The Progression Project.* Despite the anecdotal use of Bloom's Taxonomy, when talking to students across the age ranges of the CLP, we found that some of the students were having problems identifying the meanings of the main key words: remembering, understanding, applying, analysing, evaluating, creating.

SV CLP - Language for Learning collated words (*08/06/15*) *(linked to Bloom's Taxonomy)*					
Remember	Understand	Apply	Analyse	Evaluate	Create (synthesise)
List Repeat Label Record Recognize Observe Define Recap	Describe Discuss Illustrate Give examples Summarize *(KS2)* Identify	Demonstrate Solve Use Practice Predict Estimate	Explain Investigate Compare Explore reason	Decide Summarize *(KS4)* Assess Justify	Plan Design Compose Develop Imagine Generate
Infants Recall	Think about Tell	Show Change	Question	Choose Pick	make

Figure 1: Key words chosen by Teachers from SV CLP to be a common Language for learning across the CLP

The project involved collaborative learning, reviewing, and implementing of Bloom's Taxonomy in the classroom. Teachers from each school met with me three times a year to try to coordinate a CLP development. These Lead teachers from each school, agreed on identified words, *refer to Figure 1 above*, that were most helpful for use in the classroom from the Bloom's Taxonomy list and created a viable language for learning model.

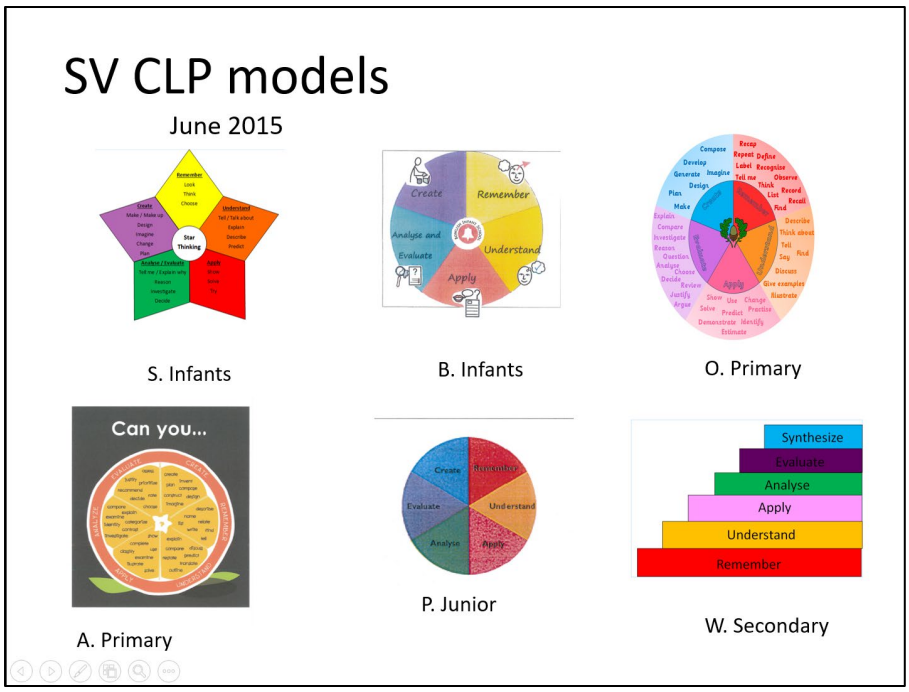


Figure 2: Examples of the models of Language for Learning used by different schools within SV CLP.

Head teachers and staff from each school used the models, *refer to figure 2 above*, and common language, *refer to figure 1 above*, across all years and in all classrooms. One staff member reported her excitement at being part of a project that would affect all the children in our CLP. Another told me how much easier it would be, for students, if we referred to words used in previous or future key stages. There was a successful collaboration between all staff in SV CLP in producing corresponding models and agreeing to key language and as a result, head teachers in each school saw teachers displaying and referring to the language within these models in their classroom teaching. At a student school council meeting in June 2015, a group of 60 students from all year groups and across all the schools in the CLP gathered to discuss issues and talk about the collaboration. At this meeting, notes were taken of discussion about the collaboration project; it was clear that there was a significant increase in understanding of the language for learning words. In 2014 33% of students who attended the school council didn't understand the meanings of the words, whereas in 2015 only 18% of students at the school council meeting didn't understand the meanings of the words. The head teachers within SV CLP wanted to focus on developing a common language to enable students to transfer from year to year, key stage to key stage, and especially from Key Stage 2 to Key Stage 3, that is the jump from primary to secondary school, without any drop in progress. No research was conducted as to whether there was a significant change in progress after this collaborative project.

This collaborative project stimulated my ideas for research, and I started to look at the language for learning within my own classroom. I started to consider how I could improve the quality of teaching and learning through the language we used in the classroom and how this might be used to maximise student progress. The focus on developing the quality of teaching and learning was also a WS school priority as it reflected the 2015 Ofsted criteria: 'The teaching of reading, writing, communication is highly effective and cohesively planned and implemented across the curriculum' Ofsted (2015).

1.2 DEVELOPING MY RESEARCH FOCUS

In 2015, at the outset of my preparation for my research, I was aware of several other school research projects in the UK focusing on improving the quality of teaching and learning through the development of a common language for learning across the school. One school, Mulberry School for Girls, in Tower Hamlets, London, had been part of the London Challenge. Their focus was improving writing, and they called their project: 'Fetch Me a Pen: Academic excellence in subject teaching across schools and subjects. 2013.' This school used research (Halliday, 1993) and (Martin and Rose, 2015) to develop academic writing skills. Their aim was to develop 'a more equitable order… [to] provide all students with access to resources'(Martin and Rose, 2015, p.4). They believed that these resources would lead to success for those students who were 'consistently disadvantaged [being] from oral cultural backgrounds.' (Martin and Rose, 2015, p.4) Martin and Rose conclude that:

> 'These tools are derived from a social semiotic theory that recognises the role of semiotic resources in creating social order, and role of schooling in distributing these resources. From this theory we have developed semiotic tools to operate in the instructional discourse to provide learners with explicit knowledge about text in social context and in the regulative discourse, to provide teachers with the means to distribute this knowledge more equitably to all their students to genuinely democratise their classrooms.' (Martin and Rose, 2015, p.19)

This piece of research and the impact of the project in Mulberry School for Girls, led me to look closer at instructional discourse within the classroom, leading me eventually to Gal'perin, a Russian Educational Psychologist and his theory of learning. This is detailed in my Literature Review Chapter.

During the academic year 2016 – 2017, the year in which I collected my research data, WS School decided to focus on student and staff motivation. This was underpinned by Carol Dweck's theory of growth mind-sets (Dweck, 2012; Haimovitz, 2017). (Refer to the Literature Review Chapter section 2.4.1 for more details on Dweck's theory). In addition to the focus on growth mind-set, WS school changed its extrinsic reward system for hard work, effort, and achievements. Whereas previously, teachers had randomly defined classroom rewards, with some whole school, head teacher, end of year prizes for sporting achievements, the reward system was changed to fit in with the new reporting system that had been developed.

The WS reporting system, occurred three times a year, focused not merely on achievement but also on attitude. Thus, students who showed an exceptional attitude towards learning and were awarded an Attitude to Learning grade 1 (ATL 1) across the term, were given "Excellent Student" badges and Tesco vouchers. In Term 1 they were awarded a bronze badge; if they also attained ATL 1 in term 3 , they were given a silver badge, and if they succeeded in getting ATL1 in term 5 they were awarded a gold badge. Additionally, students who got 100% attendance were given a chocolate prize. This, of course, added extra motivational elements for some school students, which I am aware could have affected some of my data. These extrinsic rewards affected some students more than others although one cannot attribute WS school system purely to behaviourist theory, or as simply 'stimulus-response-reward-reinforcement' (Cameron and Pierce, 1994).

After discussion and negotiation with the Head teacher of WS school, in the summer term of 2016, it was decided I should focus my research within a Year 9 class (13 – 14 years old). This year group was chosen because they were free of major exams and assessments. Year 9 was also a key year group for developing foundational skills of English Language and English Literature for the final GCSE examinations. Within the curriculum for the year was non-fictional writing, literature comprehension and essay writing, and poetry appreciation. The area that needed to be developed in the students was that of writing a cogent and sophisticated essay – this constituted a need and concern of the English Department, at that time, for year 9. The class I taught during the academic year that this data was collected was a top set of students. These students were already making more academic progress and gaining higher marks within the year group. To be placed in a top set in WS School at this time, each student had gained a high level 4 or 5 in the Year 6 Government Standard Assessment Tests, called SATs, in Maths and English. Due to this assessment grade, all these students were considered able to achieve a higher grade target of B, A or A* in all their subjects. Only one girl, had not taken the SATs due to absence, but was placed in the class on the merit of her class work and her WRAT, Wide Range Assessment Test in reading and spelling. The

students were generally considered to be an average representation of this small town predominately white school, but did not display any obvious marginalisation, discrimination or additional educational needs. The class consisted of 23 students, 13 of them were girls and 10 were boys. Out of the class of 23, 20 classed themselves as White British and three of Any Other White Background. These three students had English as an Additional Language, called EAL. During the data collection period I taught this class of year 9 students in four one hour lessons per week.

Despite all intentions to focus on a non-exam class, in September of 2016, the Government changed GCSE assessments from part exam, part course-work, to full and exclusive examinations. WS School leadership wanted to ensure the students were given more time to digest and internalise the GCSE curriculum. Therefore, in February 2017, WS School decided to enrol all the students in Year 9 into GCSE English Language exam to take place at the end of their Year 10. These students were told, after the end of my data collection period, that their grades would be assessed as GCSE.

In this Context Chapter I have given an overview of the school in which I was working, the reasons for choosing the year 9 class for my research group and a little about the events and projects that led me to embark upon this PhD research. In the next chapter I will describe and explain how my literature focus changed from Bloom's Taxonomy to a little know Soviet Educational Psychologist called Gal'perin.

2 LITERATURE REVIEW CHAPTER

In this Chapter I will start by giving an overview of how I developed my research focus. As I explained in the context chapter, it started with my involvement in a local community learning partnership progression project referencing Bloom's Taxonomy and evolved into a PhD investigation into how a theory developed by Gal'perin, a Soviet Educational Psychologist (1902 – 1988) might support progression, meta-cognition and a common language in a secondary school classroom. Gal'perin was a peer of Vygotsky and I give a brief biography and explain how his theory was an extension and development of Vygotsky's cultural historical approach. In my exploration of a common language I look at Mercer's (Mercer, N., 1995) work on educated discourse and how it dovetails into Gal'perin's theory incorporating the importance of overt speech as a significant step in the transformation from practice of the action to be learned to the mental plane of knowing how to do the action.

At the start of my research, and for the purpose of investigating language in the classroom, Bloom's Taxonomy of Learning (Anderson, 2001) seemed a perfect place to start. Bloom created his taxonomy of learning or educational objectives as a means of creating standardised assessment across a group of universities in the 1950s. When Krathwohl and Anderson revised the taxonomy in 2001, Krathwohl wrote that it aimed to be a: 'common Language about learning goals to facilitate communication across persons, subject matter and grade levels' (Krathwohl, 2002, p.8).

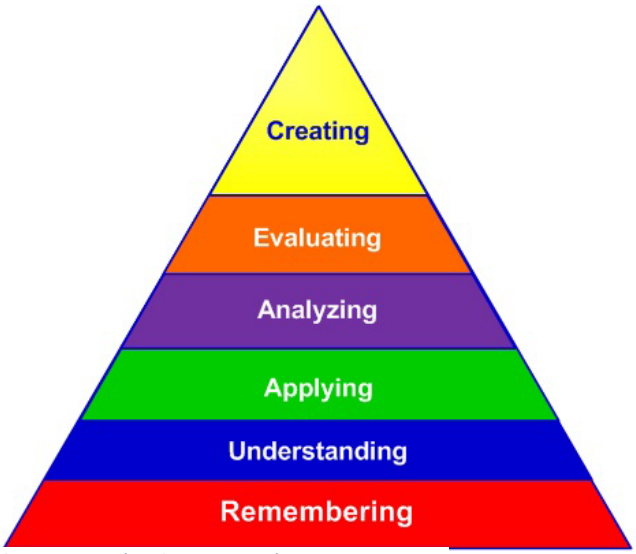


Figure 3: Bloom's Revised Taxonomy (Anderson 2001)

All the teachers I worked with, in WS school in the academic year of 2016-2017, indicated during an informal staff meeting, that they recognized Krathwohl's Revised Taxonomy Triangle, *refer to figure 3 above*, and told me that they would refer to it not only as a way of setting classroom objectives but also as a method of teaching, extending thought and pushing students into higher order thinking. (Lord and Baviskar, 2007) It seemed that Bloom's Revised Taxonomy might facilitate a common language between teachers, providing a way of talking about progression from reception to Key Stage Four, refer to Context Chapter. Given the pyramid shape used by Bloom, *see figure 3*, it appeared to lend itself to the idea of progression, in that the bottom sections of the pyramid are classed as lower level understanding and lower cognitive processes, whereas the upper sections of the pyramid represent those higher cognitive processes.

Bloom was part of the behaviourist movement, believing that human learning was similar to animal training, (Arievitch, I., 2020) and could be progressed through reinforcement, incentives and conditioning. It was thought that a programme of instruction enabled students to learn, and that a pyramid like Bloom's Taxonomy supported teachers in understanding how students learned. The pyramid was arranged 'in a cumulative hierarchical framework; achievement of the next more complex skill or ability required achievement of the prior one' (Krathwohl, 2002, p.218). Knowledge in the form of recapping on previous work or remembering were considered the basic elements of learning, while analysing and evaluating were the more difficult skills which needed to be developed and taught to the students so that they could then create their own piece of work. Many see the revised Taxonomy as an important tool for understanding students learning, 'one of the most innovative additions to the revision is the inclusion of metacognition as a component of a two dimensional matrix across all levels of cognitive processes' (Nobel, 2004, p.194)

In a US study by Nobel (2004), she found that when incorporating Bloom's taxonomy with a Multiple Intelligence theory, teachers in elementary school found it helped them plan better differentiated lessons for students and the teachers saw their students as more successful. The teachers used the matrix of Multiple intelligence and Bloom's Taxonomy to design 'learning outcomes and activities so that their students could demonstrate what they understood through different intellectual domains' (Nobel, 2004, p.194). One study in 2001 in Kentucky found that new teachers were reliant on Bloom's Taxonomy and tended to teach with a focus on the bottom

of the pyramid rather than teach students analysis and evaluation skills (Quaisar, 2001). Quaisar argues that it is perhaps their inexperience that induced this and that an experienced teacher would focus on higher order skills, creating a gap for further research.

There are many researchers, however, who believe that Bloom's Revised Taxonomy is too 'restrictive' and 'punitive' (Kohl, 2006, p.6); 'has done great harm to American Education' (Booker, 2007, p.348) and is 'denigrating knowledge' (Booker, 2007, p.353). Other researchers even argue that Bloom got the pyramid the wrong way round (Arievitch, I.M., 2020) and that 'turning it on its head opens up new worlds' (Wineburg and Schneider, 2010, p.61); and that it is 'clichéd' (Gander, 2006, p.9) Although there are some who believe it is useful in some secondary classroom contexts such as Science or Maths (Holmes, 2012) Booker points out that the Bloom's Taxonomy was originally designed for higher education assessment and not schools. (Booker, 2007). Booker refers to research done in 1966 by Kropp, Russell P. and Stoker, Howard W, that showed that: 'The staff had specific misgivings about the tests and the data which came from them. The test content was entirely chemistry and physics; every attempt to build a test on social science content was abortive.' (Booker, 2007, p.351) However, the research I wanted to undertake needed a focus on Student language and understanding, not merely the staff understanding of language or talk of common educational goals.

One way of understanding language in the classroom is more helpfully explained by Mercer who distinguishes between what he terms 'educational discourse' and 'educated discourse' (Mercer, N., 1995, p.80) He defines 'educated discourse' as that language associated with a specific 'body of knowledge' or community: a way of 'using language to think and communicate ways of words which will enable [students] to become active members of wider communities of educated discourse' (Mercer, N., 1995, p.80). This educated discourse, that students can be taught to use, is separated, in Mercer's theory, from 'educational discourse' which is defined as general teacher talk or 'initiation-response-feedback' exchanges within the classroom, we might term this classroom dialogue (Nystrand, 1997). Mercer clarifies this distinction by stating that: 'educational discourse scaffolds students' entry into the 'educated discourse'. (Mercer, N., 1995, p.81) developing a student into being an 'active member' (Mercer, N., 1995, p.80) of the community, suggests student engagement and understanding with the language used in the school community or the community of which the academic subject belongs.

Mercer commented that developing educated discourse in classrooms is difficult. Young people habitually use a colloquial and chatty style of talk and find not only 'educational discourse' tricky

to handle but are frequently 'unable' to use 'educated discourse'. Mercer found that it wasn't just the student who was uncomfortable in these circumstances. He found that sometimes when the 'child is unwilling [to use 'educational discourse'] the teacher may also be reluctant to impose the frame of reference [or 'educated discourse'] on the conversation or discussion' (Mercer, N., 1995, p.81). Often these children, who were experiencing difficulties 'were the ones who would seem to need it [educational discourse] most' (Mercer, N., 1995, p.81) This indicates the importance of the teacher creating opportunities for the student to engage with and enter into educated discourse, with encouragement on the teacher's part, otherwise the educated discourse, and entry to the 'community' remains out of the student's reach. Education is not just about subject knowledge but 'ways of using language – discourse – which students need to be enabled to understand and to use if they are to become educated.' (Mercer, N., 1995, p.85) Mercer's research suggests an active strategy of language development, as compared to Bloom's 'restrictive' (Kohl, 2006, p.6)and 'cliched' (Gander, 2006, p.9) taxonomy.

Another investigation into developing student language in the classroom was conducted by Brevik and colleagues (2014) who found that promoting specialised language use amongst groups of learners was a tool 'for reasoning, learning and metacognition' (Brevik, Fosse and Rødnes, 2014, p.54). They concluded that this allowed students to enter 'formal discourses of education' and gave them 'immanent power' and made it 'easier for the participants to move to a higher level of abstraction in their lines of reasoning' (Brevik, Fosse and Rødnes, 2014, p.54). This study goes on to explain that 'there is a need for further research…The research community could also benefit from further research on how some teachers have managed to incorporate specialized language use in their classrooms' (Brevik, Fosse and Rødnes, 2014, p.55). Brevik and colleagues point out a gap in research, which was how teachers develop educated discourse in the classroom. They did not investigate the teaching and learning process used by the teachers and point out that this be an area of further research.

White and Frederiksen (1998) conducted a small scale research study into educated discourse and student metacognitive learning. They discovered that by focusing on a metacognitive inquiry based Science curriculum, they saw more progress for disadvantaged students as they were encouraged to use specific subject terminology of Science, or scientific educated discourse within the classroom (White and Frederiksen, 1998). This supports Mercer and Brevik and colleagues' theories that developing educated discourse gives students power to move to a deeper understanding of the topic and the subject.

The research by Mercer (Mercer, N., 1995), Brevik and colleagues(Brevik, Fosse and Rødnes, 2014) and White and Frederiksen(White and Frederiksen, 1998) all point to the importance of actively developing educated discourse to enable students' deeper understanding. One recent piece of research, conducted by Hewitt (2012), highlights how this could be done. Working with a small group of year 4 students during the science lessons (Hewitt, 2012), Hewitt analysed the student group talk and the teacher input that led to the developing scientific educated discourse and understanding. She found that the student talk was more effective when the teacher planned it carefully, although she also found that 'too much structured interaction in groups can prevent higher order thinking skills.'(Hewitt, 2012, p.406) Her study suggests that it is the mediated talk by the teacher that leads students to higher levels of cognitive development. She concluded that her research emphasised the 'Vygotskian principle that a child learns when guided to higher levels of cognitive development by talk and experience shared with adults and other more able peers.'(Hewitt, 2012, p.403) Vygotsky laid out some principles of mediation and talk through which a student can access a deeper understanding of learning or metacognition.

2.1 VYGOTSKY'S THEORIES

Vygotsky's activity theory was 'an attempt to provide an account of learning and development as a mediated process.' (Daniels, Cole and Wertsch, 2007, p.2)He believed that the higher mental functions occurred on two planes: first between people ' through social interaction and negotiation' (Daniels, Cole and Wertsch, 2007, p.187)which he termed: 'intermental' and then within the individual 'higher mental functions' (Daniels, Cole and Wertsch, 2007, p.163) which he termed: 'intramental'. Vygotsky proposed that it was the place between these two planes, or the intersection of the two planes, which he labelled as the Zone of Proximal Development [ZPD] where meta-cognition, learning and development meet. In Vygotsky's ZPD, students learn through assisted discovery, in cooperation and collaboration with an adult or more knowledgeable peer. The 'intramental' is the internalized thought processes, the ones which are unobservable, the point where the student can do mental addition without the need of counters or fingers. But Vygotsky stressed that this internalised thought process was a result of the social interaction; the mediated talk was a necessary precursor to internalisation of learning.

Leont'ev, Vygotsky's student writing in the 1970s, built on Vygotsky's theory of social interaction. Leont'ev's first focus was on how object related activity, and later how speech, impacted upon mental perspective. In particular, Leon'tev did some research with Vygotsky and Luria in 1932

using coloured cards with images, introduced via a mediator with the aim of helping the children remember the names of colours and a second set of cards to help them organise the activity. He found that the younger students, aged 5 or 6, did not recognise the significance of the cards, whereas the older students did and tried to organise their work accordingly. This study emphasises the connections between a mediator and a material object as a way of developing strategies for learning. Ultimately Leont'ev focused on the role of the individual's speech and inner dialogue and how that was 'central to the development of thinking and of consciousness' (Haenen, 1996, p.81).

Gal'perin, a peer of Leont'ev, but not a student of Vyvgotsky's, attempted to transform Vygotsky's cultural-historical approach to human development and Leont'ev's activity theory into a 'working model or blueprint for outlining the teaching-learning process and the instructional interventions for the teacher to support and guide the learners' (Haenen, 2001, p.161). Gal'perin was critical of what he determined a fundamental flaw in Leont'ev's theory which was that Leont'ev did not include the orientating or objective content of an action but focused on the role of speech as central to the development of thought for action.

> 'Without drawing the objective content of external activity into the sphere of the mental, the problem of meaningful activity remained basically incomplete and could not acquire any fundamental significance.' (Gal'perin, P., 1989 (1974), p.45)

While all three agreed on the concept of tool-mediated instruments, which as such could be physical objects, signs, symbols or dialogic language. Gal'perin believed these tools need to be 'appropriated' by the individual if they were to be any use; Haenen, who studied Gal'perin in detail, defines this term as meaning: '[to] take for one's own, to get control over, to incorporate, to take in, to master, to learn.' (Haenen, 1996, p.117) This suggests there is an active requirement of the student to appropriate the learning, not just absorb the learning; learning according to Gal'perin is an active state of being not a passive one. Gal'perin went further than Vygotsky had done. Gal'perin's theory dealt with how the ZPD operated, how humans learnt, and he offered a step by step theory of how learning moved from a material objective to an internal conception resulting in automation.

Gal'perin's theory made the link between the material, the mediator, the dialogue, the outcome and the metacognitive understanding of the outcome. In the next section I include a short biography of this little-known educational psychologist where I describe his early research into the links between activity and mind, and his development of Vyogtskian and Leont'ev principles. The sources of this biography come from books, interviews and journal articles written by

Jacques Haenen, a Gal'perin scholar and lecturer at The State University of Utrecht, Netherlands from 1982 – 2014.

2.2 GAL'PERIN: A BIOGRAPHY

Gal'perin was born in 1902 and died in 1988. He was a psychologist and Doctor in the Soviet Union and diversified into many areas during his lifetime. His research in educational psychology focused on learning and how students learn through instruction. He did not work with Vygotsky directly, and in fact disagreed on a number of different aspects of Leont'ev and Vygotsky's theories, but he developed and extended Vygotsky's cultural historical approach into a specific learning theory called the 'Systematic Formation of Mental actions and Concepts'. This theory tries to explain the teaching and learning process and the changes which, Gal'perin argued, must take place for a final mental action to come into being.

Gal'perin was born into a Jewish community of the large Russian governmental town of Tambov, 260 miles south east of Moscow; his father was an Ear, Nose and Throat specialist and well known in the vicinity. In 1911 the family moved to Khar'kov where his father took up a place as Professor of Medicine. During this time Gal'perin suffered from an undiagnosed illness, now considered to be a nervous disposition, as well as tuberculosis. Consequently, due to school absences for illness, he solidified a life-long goal to 'investigate the human mind in objective terms'. (Haenen, 1996, p.8) Although he wanted to study psychology, his father persuaded him to study medicine first. This enabled him, when he did branch into psychology, to study it from a neurological and psychiatric perspective too. He studied at the medical institute of Khar'kov from 1921 – 1926 graduating as a psychoneurologist.

While working in Platonov's hypnotic research unit, 1926 – 1929, he first worked investigating the physiological processes that take place if hypnosis is used to influence such subcortical functions as digestion. He also studied the 'Babinski reflex' the phenomenon whereby when stroking the sole of a baby's foot there follows an upward extension and curling of toes. Later he worked in the treatment of addicts, administering many different hypnotic treatments. He eventually became disillusioned with this style of treatment and 'understood that at the basis of addiction lay a real illness' (Haenen, 1996, p.17) With each of these investigations, he would have seen the connection between the psychological process and the physical action. This was a very

important part of his eventual understanding of how the mind developed mental actions and understood concepts in the teaching and learning process.

In 1928 Gal'perin moved onto the psychophysiological laboratory researching how illusions affected the brain. Gal'perin hoped to understand the connection between activity and brain. 'Naturally he could never prove objectively by this method to what extent the mental perception of an illusion deviated from the geometrical figure itself.' (Haenen, 1996, p.27)

It wasn't until the period 1930 – 1936 that Gal'perin started research into the teaching and learning process as part of the team of prominent psychologists who helped form the Khar'kov School headed by Leont'ev, and it was here that Gal'perin met Vygotsky. During this period he studied 'differences in tool use between human beings and animals and on the development of human tool-mediated activity.' (Haenen, 1996, p.23) This tool mediated activity research was part of the ongoing investigation of Leont'ev and the concept of activity in which many Russian Psychologists were participating. Gal'perin did many experiments with children and their use of practical objects to achieve goals. One such experiment was with preschool children of various ages and the way they used a spade to remove articles, specifically small toys, from a bucket. He noticed the way the child, through trial and error, learnt to manipulate the spade to successfully remove the toy. This study suggested the links between practical activity and thinking.

During the Second World War, Gal'perin worked rehabilitating soldiers whose arms had been damaged in active service. He studied ways to restore full motor functions, particularly of arm movements. He discovered that: 'such a program is most successful if, in addition to isolated exercises, purposeful and meaningful actions are practiced.' (Haenen, 2001, p.45). It was this discovery of a person's need for purpose, which appears very different from behaviourist psychology within which Bloom is categorized; Gal'perin carried this idea over into his future research with pre-school children helping to 'develop his own concept of psychology in the beginning of 1950s.' (Haenen, 1996, p.51)

In 1943 Gal'perin started work at Moscow University and attempted many different research approaches to psychology of purpose and movement 'transforming Vygotsky's socio-historical approach to human development into a technology of instruction' (Haenen, 1996, p.64). His maxim was: 'No more observation; only formation!' (Haenen, 1996, p.60)which he believed occurred if the course of an action were formed with prescribed properties. Gal'perin's thesis was that: 'psychology is a special branch of science concerned with that aspect of the mind called orientating activity. Not human, mental or cognitive activity in general but only orientating activity.' (Haenen, 1996, p.68) It was this thesis of orientating activity that enabled him to develop

a Stage by Stage process of instruction starting from seeing the proposed outcome and ending with the automated outcome of that learning.

From 1950 until his death in 1988 Gal'perin researched, collected data and developed his theory of 'stage by stage formation of mental actions and concepts'. 'His approach to psychology become very influential in Soviet Psychology as witnessed by the fact that he attracted a following and that there existed a 'Gal'perin School' ' (Haenen, 1996, p.67). He held the chair of the Department of Development Psychology from 1971 until his retirement in 1984.

2.3 GAL'PERIN'S THEORY

In this section, I will present an overview of Gal'perin's theory of the systematic formation of actions and concepts and explain in more detail Gal'perin's instructional procedure suggested for the classroom which he called The Stepwise Procedure.

Gal'perin's fundamental overview of the psychology of actions involved two components which are at once distinct yet inseparable. These two parts of an action could be categorised as the 'orientating part' and the 'executing part' which Gal'perin argued realises the content of the orientation in the process of performing the action' (Gal'perin, P., 1992 (1978), p.62). An example of the importance of the orientating part of the action can be seen in the game of chess. The main part of the game of chess is to select a move from all the possible moves available. Usually this orientating component is complicated and often extended, while 'the executive component is simple: the position of a chess piece is changed from one position on the chessboard to another' (Haenen, 1996, p.148: referring to Talyzina (1981)). It highlights how we cannot perform an action correctly, unless we understand how that action is performed.

Thus orientation is similar to understanding or comprehension and execution is similar to the skill to complete the action (Gal'perin, P., 1989 (1969)). The comprehension of the action includes the information, the plan, or an image of the outcome of the action, whereas the skill in completing the action is only shown in the execution of that action. If the student has not understood, then the action will take place with errors or in an incomplete manner. In order for the student to understand correctly, and for the action to be completed correctly, Gal'perin asserted that the quality of the action depended on the guiding element of the orientating component and this orientating component needed 'specific prescribed properties.' Gal'perin concluded that this would only result from creating the necessary conditions and that these conditions should be

carefully selected to 'eliminate mistakes and reliably inculcate in the pupil the prescribed parameters of the action.' (Gal'perin, P., 1989 (1969), p.28)

In order to meet these criteria and provide the student with all conditions necessary to perform a new action correctly and without mistakes, Gal'perin developed his systematic formation of mental actions and concepts, that Haenen calls a 'complex and complicated teaching-learning process' (Haenen, 1996, p.122). Within Gal'perin's Systematic formation of mental actions and concepts there are four key prerequisites:

1. The learning motive
2. The orientating basis
3. The properties or parameters of an action
4. The stepwise procedure aimed at the formation of a fully-fledged mental action

Gal'perin placed the learning motive at the top of his list of prerequisites for learning yet, this area of motivation, despite being a current research topic of interest to many educationalists, was somewhat under-developed by Gal'perin. He skates around the issue by merely commenting that motivation 'is very important not only for the "energetics" [his use of inverted commas] but also for the structure of mental activity.' (Gal'perin, P., 1989 (1974), p.66)

Haenen 1996 hypothesizes that this might be because Gal'perin was focused on his 'theory of instruction' within which motivation is a fait accompli. In addition, Soviet Psychology in the period of 1950s -1960s, designated separate research areas of 'education' and 'action or instruction'. The former investigated attitude, motivation and personality traits needed for work and achievement in education, whereas the latter research was concerned with activity and instruction. At that time in Soviet research they believed that children were motivated to learn due to the social-cultural conditioning within society (Daniels, Cole and Wertsch, 2007).

However, Gal'perin does consider the nature of attention and wrote a paper in 1976 entitled 'The Problem of Attention'. In this article Gal'perin argues that 'internal attention is formed from the checking or monitoring of the objective content of an action.' (Gal'perin, P.I., 1989 (1976), p.84). In his research into school children in second and third grade reading for general meaning in text or carrying out arithmetic calculations, he noted that many children would 'catch this [general] meaning and satisfied with it, would disregard the details.' He characterised these children as being 'especially inattentive'. (Gal'perin, P., 1992 (1978), p.65) His research showed that children who were taught specific prescribed properties to check for comprehension and word meaning

demonstrated more attentiveness. He found that although it could be argued that 'checking only evaluates an activity or its results … attention improves them.' (Gal'perin, P.I., 1989 (1976), p.87) He hypothesised that if the concrete observation of attention is 'checking' then it negates the original theories that attention is 'the existence of an aim (to be attentive) and an effort (to keep attention focused on an object that itself is not the cause of attention).' (Gal'perin, P.I., 1989 (1976), p.89) From this research Gal'perin concluded that since 'we know its [attention] content as an activity and the ways to form it as mental activity, we can teach attention as we do any other mental activity.' Gal'perin explicitly makes the development of student attentiveness and implicitly student motivation into a concept which can be manipulated by the teacher. I develop this idea later in this chapter, refer to section 2.4.1.

Haenen suggested that this lack of detail about motivation in Gal'perin's theory was due to Gal'perin's focus on practical solutions for developing learning without errors and that Gal'perin believed that 'motivation is theoretically conceived at the analytical level of activity not at the level of actions.' (Haenen, 1996, p.124). Gal'perin's assumption of motivational presence in the student and his lack of research into what he calls a significant 'prerequisite' (Haenen, 1996, p.122) revealed a gap which could be investigated by future researchers.

For Gal'perin the orientating basis of the action was the second on his list of requisites for a successful outcome, and he develops this part of his theory in much greater detail than the first prerequisite. Gal'perin was concerned, for over twenty years, with the question of how teaching could 'ensure the formation of actions and concepts with the prescribed properties in all pupils.'(Gal'perin, P., 1989 (1974), p.66) He berated the 'shortcomings in teachers' instructions … [which] … typified the principal type of contemporary learning', (Gal'perin, P., 1989 (1974), p.68) arguing that it led to trial and error teaching which precluded cognitive awareness and student independence 'there is no more independence here than in the case of a billiard ball that careens about under the influence of the momentum given by things it caroms off of.' (Gal'perin, P., 1989 (1974), p.69)

Gal'perin's asserted that the orientating basis should include all the necessary elements needed to be known and understood by the student such as: outcome, structure, means, tools, if the action were to be completed successfully. 'To develop an action (excluding trial and error) it is necessary to give the pupil an objective basis for orientating himself in a problem situation and in the conditions and structure of the action.' (Gal'perin, P., 1992 (1978), p.79) Gal'perin called this the 'orientating basis of an action' [OBA] that represented a kind of scaffolding or stage-by-stage process taken in order to complete the action appropriately.

Through his research into mental actions in arithmetic in preschool settings, Gal'perin concluded the actions have several fundamental and characteristic properties that are distinctive and can be viewed independently of one another:

- level of appropriation
- degree of generalization
- degree of abbreviation or completeness
- degree of mastery

Gal'perin split the level of appropriation into three separate areas: material, verbal and mental. Thus, the material level is performed with hands-on physical objects manipulated in such a way to show the final outcome. The verbal level defines the necessary part of explanation and reasoning without the aid of physical or written elements. The mental level or final level is when the action become subconscious and the student no longer needs external help or support, whether verbal or physical, to complete the task; it is essentially done in the head in an almost automatic manner, that Gal'perin calls 'mental action'.

The degree of generalization 'entails singling out those properties of things to which an action is to be applied and through this the objective connection between these properties and the instruments of an action becomes evident to the pupil and serves as an explanation of the whole process for him.' (Gal'perin, P., 1992 (1978), p.59). Haenen explains generalization as being a point at which the properties of an action which are essential and constant can be distinguished from those which are variable and unnecessary, so that the learner is prevented from getting used to the inessential properties of the objects. 'Thus a general action permits transfer to a wide variety of related learning tasks'. (Haenen, 1996, p.129).

The degree of abbreviation or completeness occurs as the student gains more confidence in a process so that the sequence of operations once needed to complete the task is 'telescoped' (Haenen, 1996, p.129) and the task is completed in less time without all the scaffold or verbal reminders.

The degree of mastery occurs when the action becomes automatic and without hesitation. The degree of mastery must be of the whole and complete task, not merely one part of it. In fact, Haenen points out that a degree of mastery in only one section of the sequence of the task could develop into a significant barrier to 'complete mastery of the action'. It is thus important to continue with an extended or protracted sequence until all parts are sufficiently mastered to be

completely automatic or done within the head. Gal'perin believed mastery of the whole as the only completed task. To only do part of it with mastery was to fail and to do the action without mastery was to allow errors, and errors were what Gal'perin was seeking to eliminate. As these four parameters can be viewed independently of one another, it means that perhaps a student may be at one level of appropriation [material, verbal or mental] but the action will differ according to the degree of generalization, abbreviation, or mastery. Thus, at each stage the other three indicate the quality of that action. Gal'perin created the Stepwise Procedure as his fourth prerequisite in which all the proceeding prerequisites are included and developed in detail.

2.4 GAL'PERIN'S STEPWISE PROCEDURE

Through his own research Gal'perin identified six steps that he argued must be taken in sequence if mental action is to become automated. The six steps are simplified by Haenen (Haenen, 1996, p.133):

1. Motivational stage – a preliminary introduction to the learner of the action and mobilization of the learning outcome
2. Orientating stage: construction of the orientating basis of the action
3. Materialized stage – mastering the action using materials or physical objects
4. Stage of Overt speech – mastering the action using verbal sequencing
5. Stage of covert speech – mastering the action at the level of speaking to oneself
6. Mental stage – transferring the action to an automatic level

2.4.1 Motivational Stage

This is the first stage of Gal'perin's Stepwise Procedure and was somewhat underdeveloped by Gal'perin. Soviet educational psychology, during Gal'perin's time, recognized that an intellectual learning motive was essential or at least 'inevitable'(Haenen, 1996, p.122) if learning was to take place and generally agreed that teachers should ensure that students were motivated to learn. Haenen commented that Gal'perin believed motivation was a fait accompli if the subject was taught using his Stepwise Procedure:

> 'If the subject matter content is properly conceived and taught there will be no paramount motivational problems…[this is because]…within the activity approach, motivation is

theoretically conceived at the analytical level of activity not at the level of actions.' (Haenen, 1996, p.124).

Gal'perin's work developed Vygotsky's socio-cultural theory of learning into a practical theory of instruction for the classroom. Gal'perin's previous work had been on practical developments for the people, in particular, his work rehabilitating soldiers during the second world war and he was known and associated, within soviet psychology, with 'his attempts to transform Vygotsky's cultural-historical approach to human development into a technology of instruction.' (Haenen, 1996, p.123). Gal'perin again and again, places the blame for lack of motivation or attention on the teachers; Haenen commented that Gal'perin regularly blamed 'bad instruction' and 'insufficient preparation for learning tasks' (Haenen, 1996, p.124) that he believed student motivation and attention would be rectified by the implementation of his Stepwise Procedure.

Within his Stepwise Theory, Gal'perin recognized the importance of motivation but was not explicit about how this was developed or cultivated in any way. Firstly, he writes that the 'learning motive' is one of the four prerequisites for his systematic formation, implying the necessity of motivation within the student even before the theory of instruction can be implemented. Gal'perin assumed a motive to learn, yet he designated the first stage of the Stepwise Procedure as the 'Motivational Stage' – described as a preliminary introduction to the learner of the action and mobilization of the learning outcome. Gal'perin believed that motivation was reinforced by the Orientating stage: a full and complete overview of the work to be completed, the plan of that work and examples. The Orientating Stage along with the prerequisite motivation within the students themselves, in due course, combined to create motivation for the teaching-learning process to come. Haenen (1996) highlights that Gal'perin emphasised the need to look ahead [orientation] as a precondition of the fully learned action which implicitly included or created motivation.

Today, motivation theories applied to student learning, broadly come under two umbrellas: The Eastern or Soviet perspective, dominated by Vygotsky; and on the other hand, the Western perspective split between the behaviourists Skinner and Bloom and the cognitivists or constructivists such as Piaget. Behaviourists primarily adhered to the associationist paradigm based on Pavlov's research with dogs where bells were rung every time food was provided so that consequently the bell produced salivation in the dogs, even if no food was brought to the animals. To a behaviourist, repetition and reward are fundamental to learning and motivation; in this model the teacher is central to student learning and can directly affect the students' learning with reward and punishment. Even when researchers agreed that the human mind was

more complicated – that humans did not just 'learn like dogs' (Bruner, 2004, p.15) – many continued to focus on the correlation between learning and extrinsic motivation, such as rewards for successful achievement, perhaps because of the quantitative results available to those who sought to present educational psychology using graphs and tables, such as Pavlov (Haenen, 1996) Meanwhile, cognitivists or constructivists, such as Piaget, focused on the deliberate logical actions of a person believing these related to their intellect. In these models, the students construct a hypothesis of the world around them creating an individualistic worldview; this in turn motivates the student and it is through this lens that they make their decisions. Learning therefore becomes an individualist task, such as proposed by Steiner and Montessori (Edwards, 2002); in this theory motivation is intrinsic and the teacher's aim is to 'encourage the child's natural sense of wonder, belief in goodness and love of beauty' (Edwards, 2002, p.3) and remain 'reticent' not hindering the student's natural curiosity through exploration.

The Eastern or Soviet perspective on motivation is influenced by Vygotsky's socio-cultural theory. From this perspective, there is 'intellect' or cognition and 'affect' which includes emotion and motivation (Aidman and Leontiev, 1991, p.141). Vygotsky brought these two areas together. The former investigated activity and instruction, whereas the latter focused on attitude, motivation and personality traits needed for work and achievement in education. At this time [1950 – 1960] it was believed that one of the educational tasks was to develop educational personality within the child: 'pupils must not only perceive, but also accept school work as an activity that has societal significance and for which they have personal responsibility' (Haenen, 1996, p.124). Put simply, motivation was thought to be biological, 'irrational forces' within the individual, but actions could counteract these 'cognitive mechanisms were seen as acquired tools of control over them' (Aidman and Leontiev, 1991, p.138). Gal'perin assumed motivation was not within his psychological study of a technology of instruction, he was interested in forming action out of Vygotsky's theory; seeking to identify how learning takes place. Vygotsky's socio-cultural theory considered motivation to be intrinsic or biological and extrinsic – cultural and social – and considered the teacher to be the mediator of learning. It recognised that learning takes place within a socio-cultural setting meaning that the environment, the culture, the social expectations around the students are an important part of learning. Here, the teacher supports the student to make use of these cultural objects – such as signs, symbols, objects or language – known as 'tools' to learn. Gal'perin was developing those cultural objects as a tool of learning.

A student who is aware of the intended outcome and all the elements necessary to perform that action or outcome, should be able to complete the designated task better, perhaps a reinforcing of motivation, compared to a student who has no idea of the correct outcome or the elements

needed. 'In contemporary educational psychology this ability is considered part of students' self-regulation because looking ahead leads to cognitive planning and monitoring.' (Arievitch and Haenen, 2005, p.162) By using the teacher as mediator in the learning process, the learner appropriates the tools necessary to regulate self-learning [self-motivation] and independence. (Allen, 2010).

Jerome Bruner, in his paper, commented that: 'Too much or too little motivation reduces learning.' (Bruner, 2004, p.14) Bruner was referring to many psychological experiments on rats in 'stimulus-response-reinforcement' experiments. These 1950s and 1960s experiments on rats motivated by hunger, indicated that they successfully negotiated various obstacles and clues within a maze to achieve food. He found: 'less hungry rats had a more open curiosity.' (Bruner, 2004, p.14) When comparing very hungry rats to moderately hungry rats, the very hungry rats only learned one of the clues placed within the maze, whilst the moderately hungry rats learnt both clues. Although for many years theorists considered the possibility that all species learn and are thus motivated in similar ways, the motivation of classroom students is a slightly more complex matter(Dweck, 1986; Brown, Cocking and Bransford, 2000; Wentzel, 2014). Many researchers acknowledge a kind of motivational conflict within students: the desire to absorb learning and as such become passive and the desire for control and autonomy over their own learning. This is often described as: the passive learner v the self-regulated learner (Schunk and Zimmerman, 2008; Wentzel, 2014). The conduct of an individual is influenced through a mix of motives based on personal goals for one's future, one's sense of self and the community one is placed within. (Haenen, 1996; Daniels, 2001)

Theories about motivation are generally divided into two areas: goal orientated and belief orientated (Wentzel, 2014) and a number of sub-sets: intrinsic and extrinsic motivation; expectations; efficacy; attribution; sense of belonging and social attachment. One interesting study on goal-orientated motivation focused on intrinsic motivation and the impact of grades (Pulfrey, Darnon and Butera, 2013). These researchers found that although grades helped intrinsic motivation during the task, autonomy appeared to help intrinsic motivation post task. The researchers found that students in the grade-conditioned group appeared to have continuing motivation for the task, which was something the researchers did not expect. They speculated as to whether this was due to task accomplishment, tension and pressure feelings or 'greater context-specific perceived locus of control…[such states] have been shown to exert positive effects on subsequent motivation and behaviour' (Pulfrey, Darnon and Butera, 2013, p.54) In addition, they found that the students desire for challenge was increased in non-grade and autonomy tasks and that the most ego-reinforcement came through grade achievement.

Carol Dweck has written much on motivation in recent years, (Dweck, 1986, 2000, 2008) and she advocates that any goal orientated strategy to increase motivation is worthless in the face of what she calls entity theory; this would include grade-conditioned students in Pulfrey's research as mentioned above (Pulfrey, Darnon and Butera, 2013). Dweck's theory is that the student's motivation is dictated by a deep-seated personal belief in their own ability. 'The mindsets children hold about abilities and intelligence can set them on different trajectories of motivation and learning' (Haimovitz and Dweck, 2017) Dweck coined the phrase: 'entity theory' to define the idea that students have an unchangeable amount of intelligence, that a child is born with that amount of intelligence and cannot grow or develop further than the amount of intelligence she / he is born with. Motivation, within this 'entity theory' mindset, can be severely hampered if the student believes, no matter how hard they try or what strategy they use, they will not succeed as their own intelligence is limited and unchangeable. Dweck found that by cultivating an 'incremental theory' of intelligence a greater sense of motivation was created. She describes 'Incremental theory' as intelligence that is malleable, with improvements always occurring through hard work. She argued that this created more self-regulation and motivation, more effort and more self-improvement. More importantly, for the practicing teacher, she and her researchers also found that incremental theory could be developed within students, if it was not already present (Dweck, 2012).

Dweck's theory fits within the socio-cultural theory of teacher as a mediator of development and learning since she advocates the intervention of the teacher in shaping and developing students. This suggests that by challenging and encouraging the students' expectations of personal achievement, by promoting an 'incremental theory' mindset, students are motivated to achieve more. Indeed, this idea of challenging expectations fits within Gal'perin's theory, as he believed that the Stepwise Procedure would allow students to achieve things they might otherwise consider impossible, due to the obstacles they place before themselves, such as doubting personal ability and questioning potential attainment (Dweck, 1986). The orienting basis was intended to reveal the outcome and process of the task to allow students to appropriate knowledge quicker. (Haenen, 1996).

The research by Wood, Bruner and Ross (Wood, Bruner and Ross, 1976) also compliments Gal'perin's idea of motivation within his Stepwise Theory. These researchers found through research with children aged three, four and five, that motivation hinged on the 'tutor's role as an activator.' (Wood, Bruner and Ross, 1976, p.89). Working with these young children, the tutor, or teacher, facilitated the building of a three-dimensional structure through the use of a mixture of advice and focusing tactics which the researchers called: 'a scaffolding process'. (Wood, Bruner

and Ross, 1976, p.90)Their focus was on how the 'scaffolding process' and intervention on the part of the teacher played the roles of 'keeping [the student] in pursuit of a particular object. Partly it involves keeping them in the field and partly a deployment of zest and sympathy to keep him motivated' (Wood, Bruner and Ross, 1976, p.98).

Thus, we can surmise that the motivation Gal'perin refers to in his theory of Systematic Formation of Actions and Concepts is both an intrinsic societal motivation and an approach-learning goal orientated motivation with focus on mastery of tasks. Markova 1990 in her article: 'A Strategy for Forming Learning Motivation' has an account of the development of learning motives within the Soviet psychologists' activity theory approach. Markova, rather than dismissing the notion of motivation, or merely acknowledging it to be a prerequisite, found that teachers should see reinforcing motivation during the lesson as a 'special task' (Markova, 1990, p.281). She posits that motivation is a complex combination of broad motives influenced by cultural and social expectations; goals which would be specific, non-standard, and often short-term; and thirdly, emotions encompassing self-worth and attitude to learning. Significantly, Markova supports Gal'perin's idea that motivation is initiated through a full and complete orientation of the work and outcome. However, Markova doesn't just assume this is enough, but advocates that the overall objectives are 'reinforced.' (Markova, 1990, p.280) She also found that students who not only understood the assignment, but carried out active study tasks, monitoring and assessing their own work, were more motivated: 'they became involved in the process of assessing their own education… [giving] … rise to new educational-cognitive motives and promoting an interest in the content techniques and the process of learning.' (Markova, 1990, p.281) Furthermore, she found that if the students self-evaluated before starting their work, were involved in independent tasks and independent comparison of their methods of study, it reinforced their attitude to learning and increased their motivation.

The idea that the students are more motivated to learn independently or autonomously is important to Gal'perin's Stepwise Procedure. He seems to be suggesting that the teacher, despite working with the students and being a mediator, must lead and dictate the process through which the student must proceed in order to learn free from mistakes or the elimination of 'blind stabs' and 'trial and error' (Gal'perin, P., 1989 (1974), pp.70-71).

2.4.2 Orientating Stage

This, the second stage of Gal'perin's Stepwise Procedure is separated into two parts: firstly, the Orientating Basis for an Action [OBA] and secondly, the 'Scheme of a Complete Orientating Basis

of an Action' [SCOBA]. The former includes those elements necessary to complete the action. The student creates this as he/she is initially introduced to the outcome and it is developed as a result of the student's own motivation and past understanding. The OBA changes as the student clarifies the process of the action by appropriating the SCOBA.

The SCOBA, which is then separated in six stages, is created collaboratively by student and mediator as a complete scheme for the action to be executed precisely and accurately. The SCOBA becomes a kind of 'cognitive map for an orientating basis,' (Haenen, 1996, p.134). The SCOBA is given verbally explaining the purpose, properties and tools needed and demonstrated physically at a slow pace and in 'so much detail that it becomes clear to the learner how the operations involved are connected to changes in the material' (Haenen, 1996, p.134)

The SCOBA is externally presented to the student and the orientating chart is just part of that process serving as a 'tool of action'. Thus, a SCOBA comprises of six parts:

1. The intended output of an action as in an image, full and prescribed, of the product of the action
2. The pattern of model of the action as executed by a craftsman or expert with clearly 'prescribed indices'
3. The means of the action – the tools and how they are used to complete the action
4. The objects of the action – objects here meaning the materials used for the action
5. The general plan of action giving the cause of action and the sequence of its operations in a summarized form
6. The orientating chart or cheat sheet representing the former five points in summary

The Orientating Stage requires the students to understand the outcome, to 'form a picture of the circumstances, mapping out a plan of action', (Gal'perin, P., 1989 (1969), p.28) Gal'perin's idea of the Orientating Stage was that the student would be provided with all the 'necessary preliminary knowledge' in a 'schemata for a complete orientating basis of the action' so that the student would understand everything about the task before he started and thus be guided by the schemata to complete the task 'correctly'. (Gal'perin, P., 1989 (1974), p.71). In order for the action to be learned and executed without errors, it was important, according to Gal'perin, that the students saw 'the form of the action … demonstrated by a 'craftsman' (Gal'perin, P., 1989 (1974), p.69).

Gal'perin argued that traditional teaching although orientating students in general to a final result, the students attempt it 'blind' as they are not instructed through the 'great many conditions and methods of action' needed to reach the final result and many hours of trial and

error with 'considerable expenditure of time, effort and materials' (Gal'perin, P., 1989 (1974), p.68)is required to reach that result.

Gal'perin is not merely advocating a scaffold for the student. He is expanding the understanding necessary for a successful outcome to incorporate use of the tools and the material, knowledge of the final product and observation of a craftsman creating that product even before a scaffold is created. Gal'perin calls the scaffold an orientating chart.

The orientating chart is then developed with the students. The orientating chart is a system 'of conditions for correct performance of the assignment … in the form of notations on a card.' (Gal'perin, P., 1989 (1974), p.69). Haenen describes it as a 'scientifically based, learner-proof cheat sheet.' (Haenen, 1996, p.135) whereas as Gal'perin described it as 'terrible to look at' (Gal'perin, P., 1989 (1974), p.77) citing the complicated nature of the elucidations of the properties, materials, tools, and method. And yet Gal'perin argued that although complicated, it was 'learned unexpectedly easily in action in the process of problem solving' (Gal'perin, P., 1989 (1974), p.70).

Gal'perin emphasised that this was not rote learning or trial and error learning, but that in understanding all the components of the orientating basic of an action and having them written down in such a way that the student could follow the method resulted in immediate success. He compares his SCOBA with the 'goal gradient' of traditional methods of trial and error teaching, commenting that the goal gradient is 'not eliminated but changes in manifest form – the relation to the goal is established not gradually but immediately'. (Gal'perin, P., 1989 (1974), p.71)

According to Talyzina, 1981, cited by Haenen, 1996, there were two possibilities for the way that these six characteristics can be revealed to the learner. One is a limited SCOBA which only relates to one specific task and cannot in any way be used for other related tasks. The other SCOBA is general and could be transferred to other similar or somewhat related tasks. In practical terms, for example in an English Classroom, a teacher might create a SCOBA for an essay, that could be transferred to a history class where the student needs to write an essay; this would be a general SCOBA. However, the same English teacher might write a SCOBA for writing a metaphorical poem, relating to one task and thus limiting the use of the SCOBA; it might be difficult to transfer this to other areas of the curriculum or other circumstances within the English subject itself. In addition, the SCOBA is not always as complete or accurate as it could be, due to human error. Thus, Gal'perin made a distinction between a SCOBA and an Incomplete Scheme of Orientating Basis of the Action [ISOBA]. Further limitations are enhanced by the way the SCOBA is constructed. For instance, if the student is handed the SCOBA ready made in advance by the

teacher and it is of less benefit to that student and reduces the meta-cognition and transfer than when it is constructed by the learner, under the teacher's guidance. Gal'perin only acknowledges the first three types of SCOBA in his own research and writings. 'To Gal'perin the integral arrangement of the teaching learning process depends on the types of orientating bases revealed and conveyed to the learner.' (Haenen, 1996, p.152)

Eight SCOBA Types as adapted from Talyzina 1981 (Haenen, 1996, p.151)						
SCOBA TYPES	Degree of generalization		Degree of completeness		Way of appropriation	
	Concrete	General	Incomplete	Complete	Ready- made provided	Guided constructed
1	*		*			*
2	*			*	*	
3		*		*		*
4		*		*	*	
5		*		*	*	
6		*	*			*
7	*			*		*
8	*		*		*	

Figure 4: Showing the eight different types of SCOBA

The table above, figure 4, shows how Haenen has interpreted Talyzina's explanation of Gal'perin's SCOBA. There were many which did not meet Gal'perin's strict criteria: General, completed, and guided constructed. Those SCOBA which did not include these three criteria were termed by Gal'perin as 'unstable, errors unavoidable and success in the learning will vary greatly between students…[necessitating]… a trial and error method.' (Haenen, 1996, p.153).

If the SCOBA was concrete it would create successful and regularly duplicated outcomes. However, it was too limiting and non-transferable. Thus, for each new task and new set of conditions a new SCOBA must be produced. If a SCOBA were given to students in a ready-made form, there was a lack of understanding and cognition, they were again working on a goal gradient with trial and error until they somehow understood the instructions given to them. If a SCOBA were incomplete than the task cannot be completed accurately or successfully resulting in many errors.

In creating a SCOBA that was general, completed and guided-constructed between mediator and students, a more rational teaching strategy was formed. Students worked with the teacher to construct a SCOBA, within the 'Zone of Proximal development'.

> 'The learners are armed with a method of analysis enabling them to put together a complete and 'rational' orientating basis … [the] … 'distinctive features of this teaching strategy and its relationship with the appropriation of a cognitive repertoire or tool kit of concepts and ideas and theories, permit one to get to the higher ground mentally' (Haenen, 1996, p.154)

According to Gal'perin, in order for students who have been taught the Stepwise Procedure, to transfer their knowledge readily to other subject areas, the needs to be general, guided-constructed and complete. Students work with the teacher to construct an orientating chart that will enable them to complete the task without errors.

Gal'perin's own research involved teaching five 6-7-year-olds' handwriting skills. He found that if the SCOBA was generalised, guided-constructed and complete, the children were very able to transfer their skills into other areas, such as drawing other graphic symbols in Latin or Arabic. (Gal'perin, P., 1989 (1969), p.32) Involving students in this way is important in this research, as it made the SCOBA and the orientating chart meaningful and accessible. The whole idea of the orientating chart is not to give students some mechanical, instructive, failsafe scaffold, but by working with the students to analyse the features of the tools, material, and craftsman's product, it enabled them to see the mechanics of the task, develop a deeper understanding. In this way, students were more confident to analyse or deconstruct other similar tasks having a meta-cognitive understanding of the elements of the task.

2.4.3 The Materialized stage

This is the third stage of Gal'perin's Stepwise Procedure. This stage is a physical or hands-on manipulation, using models, displays, diagrams or drawings to allow the students to visualize the action and outcome and 'permit the learner to execute the action by using substitutes of the external physical objects.' (Haenen, 1996, p.139) Gal'perin emphasized the importance of materialisation '(of thinkable properties and relations) objective properties and relations that are inaccessible to use directly in their genuine, material form acquire a material form that is directly and sensuously accessible to us.' (Gal'perin, P., 1989 (1957), p.50) Although Haenen commented that this materialisation of concepts or elements which are not readily available could cause problems for the teacher and student (Haenen, 2001) , Galperin argued that if learning was not

represented in material form then the 'process of their being learned thoroughly, will be seriously impaired'. (Gal'perin, P., 1989 (1957), p.51)

Gal'perin advocated deconstructing the material or materialised form of the action to 'break it down into its component operations that enable the pupil to retrace each of those operations and the connections among them.'(Gal'perin, P., 1989 (1957), p.51) Gal'perin proposed a way of teaching with clear separation between physical manipulation and exploration of the components of an action and the 'objective sequence of phenomena being studied'.(Gal'perin, P., 1989 (1957), p.51) So that a teacher might teach atoms using balls of different sizes. The teacher does not want the student to think that atoms are balls, only that the manipulation of the balls can help the student to understand the properties and explore the components. In doing so, Gal'perin proports that the students can think and reflect upon the properties and relationship between the properties and the action and thus it 'serves as an explanation … ensuring rationality of an action'(Gal'perin, P., 1989 (1957), p.52).

2.4.4 The stage of Overt Speech

This is the fourth stage in the Stepwise Procedure. At this point all material representations are removed and the students describe and explain the action and process through the verbal medium only. Gal'perin emphasized the importance of this stage, arguing that the verbal stage allows the action to be transformed from the material into its mental form or automation. The verbal rendition is a reflection of the materialised form but at the same time substantially different. It is transformed from something performed in the hands to language, 'speech in its originally objective-social, auditory-linguistic form'.(Gal'perin, P., 1989 (1957), p.52). This stage of overt speech included the communication of the action to others, be they teacher, peers or others. This socialized speech and the communicated thinking resonates with Vygotsky's 'social speech that becomes the source of thought'. (Haenen, 1996, p.141). Thus, internalization becomes the next stage. Not only does this stage allow for a generalization of the action, as the student aims to describe and explain a procedure without materials, it also helps the student abbreviate the action and begin to master the task. Gal'perin utilises Vygotsky's theory, moving from intermental stage, through ZPD, resulting in intramental stage, but Gal'perin designates the steps through which the learner must progress to gain automation or intramental thought.

For Gal'perin, the Overt Speech stage is not just about the social aspect and negotiation of the content, but he argued that it was 'fully and meticulously transferred…and the only point content

enters entirely into consciousness… a verbally evoked representation about the object content of the action' (Gal'perin, P., 1989 (1957), p.52). For the student though, Gal'perin commented that the Overt Speech Stage is merely a verbally evoked representation, that the student was not aware of the object becoming thought. However, the student is by explaining the action in speech, 'learning a relation to this form of the action from the standpoint of other people, the student thus creates a 'co-knowledge' (Gal'perin, P., 1989 (1957), p.53) within. This 'co-knowledge' becomes the backbone for the meta-cognition and use of educated discourse, (Mercer, N., 1995) the entry into the academic arena giving the student 'immanent power' and making it 'easier for the participants to move to a higher level of abstraction in their lines of reasoning' (Brevik, Fosse and Rødnes, 2014, p.54). This indicates the importance of the Overt Speech stage in the learning process. Gal'perin argued that unless the Overt Speech stage was implemented, learning would be incomplete.

2.4.5 The Stage of Covert Speech

This is the fifth stage of Gal'perin's Stepwise Procedure. The stage refers to the stage of child development as the child stops speaking out loud the actions it will perform to others, but rather transitions to a quieter, partially external, partially internal, speech to self. The speech in this stage becomes an 'instrument of thought, a means for the successive transformation of the initial material for oneself in one's mind.' (Gal'perin, P., 1989 (1957), p.53) A student at this stage, now whispers to her /himself, using the language from the 'Overt speech' but in an inaudible manner or in the mind. Haenen described it as a copy of the overt speech stage including actions and objects. 'The action at this stage becomes more habitual and more abbreviated … an inner dialogue or dialogical thinking.' (Haenen, 1996, p.142) Gal'perin stressed that this speech to oneself becomes 'part of the process of thinking', without which the final and most important stage cannot be realised.

2.4.6 The Mental stage

This the final stage of Gal'perin's Stepwise Procedure and the place of automation of action or what Gal'perin terms 'pure thought'. The 'automatization of an action performed in speech to oneself and its receding beyond the limits of consciousness are the source of illusions of 'pure thought'. (Gal'perin, P., 1989 (1957), p.55) Haenen describes it in this way: 'Now, the action will be quickly abbreviated and extremely telescoped. The action takes place in the mind and has been transformed into a mental phenomenon.' (Haenen, 1996, p.142). The student might not recognise this process, Gal'perin comments, saying that the student will say: ' I just know that's

how it is already … [echoing] the vestiges of abbreviated external speech to oneself' (Gal'perin, P., 1989 (1957), p.54) Although the actions are now pure thought and, in the mind, they have not gone, they are merely abbreviated and unable to be observed or inspected, what is observed is the final product created by the student.

2.5 GAL'PERIN'S RESEARCH

Gal'perin conducted three different pieces of research to exemplify his Stepwise Procedure, each of them involving primary school children of 6 years old.

The first experiment was focused on graphemes. At the start of the experiment the students were shown a model of the grapheme. The graphemes used were letters of the Russian alphabet. The grapheme was specifically explained through the use of 'contour … shape, size and position'. (Gal'perin, P., 1989 (1969), p.32). The grapheme was further divided into segments using intersecting horizontal and vertical lines called indices. The children were taught how to locate the indices and segments and specifically name the co-ordinates. Using the verbal characteristics, the children were shown how to transfer these 'points to a blank space on a line, on the basis of the verbal characteristic, and then draw the contour from these points'(Gal'perin, P., 1989 (1969), p.32). In addition, the first grapheme learnt was verbally described and explained while it was demonstrated. These indices were identified as units or 'segments of constant direction' (Haenen, 1996, p.160). Gal'perin explained that at each point of change of direction the teacher put a mark and each segment was described or given a verbal characteristic – as: vertical, horizontal, oblique and such like.

Gal'perin emphasised the importance of the communicated thinking with other children, as one child wrote the grapheme, the child explained and described the shape, direction and position to their peers so that 'another child could accurately point out where it was' (Gal'perin, P., 1989 (1969), p.32). Gal'perin was able to show that after this detailed instruction and verbal replication of 'several' graphemes, the children were able to 'independently write the remaining Russian Alphabet … and easily analysed and reproduced Latin letters, Arabic, Armenian writing, stenographic symbols, blueprints, drawings and drew the trajectory of moving bodies on a plane.' (Gal'perin, P., 1989 (1969), p.32) Haenen, who had interviewed Gal'perin on many occasions, wrote that in order to write the first grapheme correctly, the students Gal'perin had worked with, on average, needed 14 trials and by the time they were writing the 20th grapheme only one try

was necessary. Although in Gal'perin's article he used the phrase 'after learning several letters in this way', it should be clarified that the children learnt this method for 20 out of the 56 letters of the Russian Alphabet, before they could do it independently(Haenen, 1996). It seems that the repetition of the detailed instruction and verbal replication, helped the children develop their understanding of the graphemes and thus enabled them to transfer their understanding of the drawing of shapes to other letters of the alphabet.

The second piece of research conducted by Gal'perin was on the teaching of grammar of the Russian language. It is not, however, clear if the children he worked with were from the same group who had learnt about graphemes or were a different class of 6 year olds. Gal'perin explains how the research started with the identification of a 'discrete word … a seme, not a morpheme, a [kind of] message unit'. (Gal'perin, P., 1989 (1969), p.33). The researchers along with the children created a schema for the seme, using rows and arrows to indicate how words emerged and corresponded to the initial seme. Gal'perin claimed it was 'rather complex but clear-cut system…[showing] … combinations of different message units' (Gal'perin, P., 1989 (1969), p.33). He concluded that the deconstruction of Russian grammar and the subsequent schema that was created allowed for 'direct application to written and oral speech without any memorising and with a steadily growing interest [from the point of view of the child].' (Gal'perin, P., 1989 (1969), p.33) Gal'perin was particularly interested in the way this deconstruction of language could be used for foreign language learning and urged that more research be done in this area.

Another piece of research conducted by Gal'perin and his colleagues, Georgiev and Obukhova, worked with children of 6 years old in their initial study of arithmetic specifically researching measurement and the properties of measurement. (Gal'perin, P., 1989 (1969)). Starting with the socio-cultural importance of measurement in everyday life, the researchers used tools and material measures to show the children how 'the property of a thing can be measured only with its own measure' (Gal'perin, P., 1989 (1969), p.34). The children were taught to be their own critics and gave their opinion on how their peers measured and what could be done to eliminate mistakes and provided a correct result. After measuring divisible and indivisible objects, such as doors or walls, the children applied marks to the thing and could quickly distinguish the property, the measure required and see 'a thing as a set of the number of times a measure was applied … carrying out the actions to correct and rapid completion' (Gal'perin, P., 1989 (1969), p.35). The researchers then included number recognition, but only using the numbers 0, 2 and 3, introducing a rule of ± 1, and the children constructed 'new sets of numbers (independently) in accordance with the rule [although] the children did not know how to write and only used figures printed on cards'. (Gal'perin, P., 1989 (1969), p.36)

To highlight the advantage of using the full orientating basis for learning and Stepwise Procedure over the traditional methods of learning, the researchers conducted a comparison study. Taking 50 children from three different kindergartens who had already been instructed with the traditional method of arithmetic. The children were taught using Gal'perin's stepwise procedure over a period of 8 months, and during that time were tested once at the start, giving baseline results, and again at the end of the 8 months. The test consisted of 18 different arithmetic problems. The results were compared with a control group of 60 children of the same age, who were considered good or excellent in arithmetic. The final results indicated that those children taught using Galperin's methods were more successful in the final tests.

Problem	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Control group	47	78	52	47	18	8	47	33	32	17	42	25	68	52	55	55
Research group Before	42	44	36	28	18	4	26	40	44	24	38	22	52	40	32	32
Research group After	100	100	100	100	100	100	100	100	100	92	92	96	100	100	96	98

Figure 5: Table showing the results Gal'perin and his colleagues obtained from 16 different arithmetic tests conducted on two groups of children in a comparative study to show the advantages of Gal'perin's Stepwise Procedure. (Gal'perin P 1989 (1969))

The results from Gal'perin's comparison study, *refer to figure 5 above*, confirmed to him and his colleagues that his Stepwise Procedure and the disclosure of a full orientating basis enabled the children to understand how the thing being compared was 'a collection of many and different magnitudes … the trick of our method of instruction was that it did not contradict what the children saw … and that a change in only one property of a thing does not alter some other property of it.' (Gal'perin, P., 1989 (1969), p.40) Gal'perin argued that his Stepwise Procedure changed the children's understanding from basic images into distinguishable properties and from unordered bits or particles to identifiable basic units which were now recognisable within other areas of arithmetic. He concluded that 'in other types of learning, concrete knowledge about facts and laws is assimilated without any connection with these general schemata and largely without any conception of them.'(Gal'perin, P., 1989 (1969), p.42) Gal'perin believed that a Full scheme of orientating basis was needed for the children to fully understand and tackle the problems correctly. This comparative study shows that the Stepwise Procedure takes time to produce results, it is not a quick method of achieving perfect results, but it enabled the children to have a deeper understanding of the problems they were presented with thus answer a number of different types of arithmetic question with an ease that is not shown in the control group.

The final piece of research I will describe is one which emphasises the importance of the orientating chart and the organisation of the SCOBA, Gal'perin refers to a study conducted by one of his colleagues Nechaev in 1972 (Gal'perin, P., 1989 (1974)). Nechaev studied how law students, at university, appropriated and learnt certain aspects of the law. He devised an orientating chart or card which was arranged in a 'form of successive levels on a tree of solutions .... each level represents a higher degree of definition of an object and its discrimination from others … this SCOBA made it possible to combine, compare and distinguish clearly all the types of objects and phenomenon studied in a particular section of legislation'(Gal'perin, P., 1989 (1974), p.75). After giving the students a complete orientating card – solution tree – he gave them problems connected with this area of legislation. He found that students could 'solve many problems within an hour and a half, and they learnt the content of the card so quickly they ceased to refer to it' (Gal'perin, P., 1989 (1974), p.77) except for complicated cases. After a period of using the card, the students were tested, the test showed they were able to solve all the problems from this section of law, only rarely asking for permission to look at the cheat sheet.

In this piece of research, Nechaev created the orienting chart for the students; it included all the various criteria and knowledge needed by the students in order to solve the difficult cases. The research does not appear to suggest that the students collaborated in the creation of the orientating chart, which appears contrary to Galperin's and Talyzina's (Haenen, 1996) work into the most successful SCOBA: guided-constructed, general and complete. (Refer to section 2.4.2. p41). Nechaev's orientating chart is teacher constructed. Gal'perin's response to Nechaev's chart implies he was impressed: 'This must be seen to be believed!' (Gal'perin, P., 1989 (1974), p.77). Although this endorsement by Gal'perin could indicate that a teacher constructed scaffold could enable the students to complete the action appropriately, on the other hand, it could be argued that it takes away the ownership from the students and puts the onus purely on the teacher to 'assimilate 'ready-made knowledge', (Gal'perin, P., 1989 (1974), p.80) a criticism which Gal'perin admits to within this paper. In reflection on this piece of research by Nechaev, Gal'perin argued that although the SCOBA could be established either through 'independent discoveries on the part of the pupil – guided by the teacher, or by conveying it in a finished form' it was the 'diversified working in and thorough assimilation' (Gal'perin, P., 1989 (1974), p.81) that was important for meta-cognition within the students. Automation was reached quicker when the SCOBA was guided-constructed, general and complete. (Gal'perin, P., 1989 (1974); Haenen, 1996)

2.6 SOME CRITICISMS OF GAL'PERIN'S APPROACH

In this section I discuss some criticism against Galperin's theories, despite the fact that the research conducted by Gal'perin and his colleagues indicated that using the Stepwise Procedure enabled students to made 'correct and rapid completion' of tasks presented to them. (Gal'perin, P., 1989 (1969), p.35).

One such critic was Karpova. Karpova's criticism, in 1955 cited by Haenen (Haenen, 1996), argued against the necessity of the material action as part of the overall process of the stage by stage formation, highlighting the inexact and unhelpful inclusion of 'material objects' that were said by the Gal'perin to represent the final executive action but in fact confused and hindered understanding. Karpova's criticism came after a pilot study of young pre-school children and a similar grammar experiment to that conducted by Gal'perin referred to in section 2.5. She questioned whether these young children could identify how many words there were in a sentence, even before they could understand the words themselves. Haenen comments that many Soviet academics were bewildered as to the reasons for using counters to represent words in a sentences and 'considered it nonsense to analyse sentences with such material support'. (Haenen, 1996, p.185). Haenen supports Karpova's criticism by citing the Dutch Psychologist Van Oers (1987) who argued it might even be 'dangerous to the teaching-learning process…[if]…pupils learn to expect an abstract quality to have concrete existence…[it may]…become a psychological barrier preventing them from taking part in theoretical activity and understanding'. (Van Oers (1987); cited by Haenen, 1996, p.185). These researchers argue that in creatively making a concept something other, for instance a blue counter to represent syllables, it would minimize learning, student meta-cognition and their ability to transfer this learning to another topic or subject.

Gal'perin, however, counter-argued that the material stage and the mental stage are not juxtaposed but neither are they equivalent; the mental action reflects the material action. The internalization process is far more complicated than merely mirroring the material action as a mental action, but it is the material action that creates a 'plane' for the mental action to develop, 'mental actions and concepts is a combination of conditions that ensure the cultivation of such desired properties as rationality, generalisation consciousness [and] ease of execution in different forms.' (Gal'perin, P., 1989 (1974), p.81) Haenen supported Gal'perin's argument explaining that it is a development of Vygotsky's meditational tools or the semiotic, as in 'language, mnemonics and scheme conceived as psychological tools used on an inter-

psychological plane will be the same means used on the intra-psychological plane.' (Haenen, 1996, p.188).

However, Gal'perin was aware of the shortcomings of the materialized stage. He agreed that it was often impractical to work at a materialized stage, depending on the subject and task. Secondly, he argued that the material action was bound up with the material objects themselves and the students may proceed down tangential paths of investigation rather than the prescribed SCOBA. Thirdly, he commented that the lack of transfer due to the applied aspect of this stage could prevent further theoretical transfer. Haenen argued that Gal'perin's recognition of the problems with materialized action broadened his 'Systematic formation' for use across subjects and curriculum topics; it implies a flexibility of implementation. Within this flexibility, the materialized action is not excluded but can, when necessary, be replaced by abstract displays or models. These models can present the essences of the structure of the discipline. These models might only be represented by pieces of paper, but it is the idea of physical manipulation that helps the learner to understand. It underlines the idea that the SCOBA is a holistic representation of the action and what is important is stimulating understanding in the student not being bound by the material representation of that action.

Gal'perin was concerned that his Stepwise Procedure was not robust or capable of producing creative thinking, since he argued that not enough was known about the process of creative thinking for it to become a refined system unlike some practical and scientific tasks. However, he argued that by developing the sub-systems of good knowledge and abilities along with prescribed properties of concepts enabled 'better preparation for creative thinking later and does not interfere with this task but even created the best mental preconditions for it.' (Gal'perin, P., 1989 (1974), p.82) He described creative thinking as a 'special task' advocating that general education using his Stepwise Procedure would create a better foundation for the development of creative thinking, or rather for creative thinking to happen because the student had had a more extensive and more effective education. This is particularly interesting from a teacher's perspective. In general, the teacher is purposed with the education of the masses. It is important that as many students pass the test (end of school exams) as possible. And yet the criteria for the highest grades in English GCSE are awarded to those who include creative flair and originality within their texts. It might seem that Gal'perin's theory would support a technically appropriate essay but possibly not one that reaches the very highest grades.

By far the biggest and influential criticism occurred in 1958 during an educational conference held in The Soviet Union with the aim of reforming the school system. At this conference, a paper

was delivered by Kalmykova which specifically criticised Gal'perin's Stepwise Procedure and his teaching-learning process. (Haenen, 1996) Haenen described the main objection to Gal'perin's procedure was that it was far too narrow to prove useful in regular school settings and within the regular school curriculum. Kalmykova argued that the Step by Step process led to reliance on the teacher, leaving the student with little room for initiative. Menchinskia, another Soviet academic, (1960) reinforced Kalmykova's criticism arguing that Gal'perin's Stepwise Procedure hindered and disregarded productive and creative thinking resulting in a passive learner (Haenen, 1996). In fact some went further than that, portraying Gal'perin as a 'Soviet Skinner', a behaviourist who favoured programmed learning and merely separated complex tasks into small steps (Arievitch, I., 2020).

This criticism against Gal'perin's Stepwise Procedure as being narrow and restrictive has been long lasting, and Arievitch's 2020 article creates space to refute these assertions. Arievitch (2020) argues that Gal'perin's theory is much more holistic than a set of behaviourist steps to learning. He argues that the behaviourist wants steps that create learning, whereas Galperin was interested in the meta-cognition of the student. 'Students can follow the teacher's directives and instructions and in some instances memorise the instruction and procedure …but this is not real learning, as they do not make the new knowledge their own'(Arievitch, I., 2020, p.2). He argues that rather than creating a 'blueprint' for teaching, Gal'perin's theory was 'originally conceived as an investigation of the basic regularities of activity transformation and for theorising the role of learning in cognitive development' (Arievitch, I., 2020, p.2). It is a reconstruction of the conceptual steps of how a student learns, so in understanding how a student learns, the teacher can provide 'sufficiently thorough and theoretically understood system of conditions for shaping the knowledge and abilities with prescribed properties, [and finally lead to] the desired level of mass education' (Gal'perin, P., 1989 (1974), p.80). Gal'perin was trying to change the educational culture from what he termed 'blind'(Gal'perin, P., 1989 (1974), p.77) teaching and trial and error methods, to a more holistic approach, 'based on students active and cooperative exploration and leading to students much deeper grasp of the issues at hand' (Arievitch, I., 2020, p.3). It is this holistic approach and the disclosure of a full orientating stage, which seems significant for today's classroom and the support of students' autonomy.

2.7 EXPANDING ON GAL'PERIN'S THEORY

In this section I will describe how Gal'perin's approach has been expanded upon and could be developed for today's classroom. Haenen compared Gal'perin's Stepwise Procedure to that of the 'contemporary sociocultural approaches to interaction and instructional discourse of Mercer 1995, Rogoff 1998 and Wells 1999' (Haenen, 2001, p.167). He argued that Gal'perin was looking beyond mere instructional process to the 'fully fledged mental actions' of mature synthesis of what has been learnt and facilitates a development of students' 'self-regulatory skills' as the 'subject matter is presented as a meaningful whole' (Haenen, 2001, p.167). Haenen working with Arievitch developed a new model of Gal'perin's Stepwise procedure, which they believed displayed the deeper understanding and progress that occurred in the students as a result of the Galperin's Stepwise Procedure in the classroom (Arievitch and Haenen, 2005).

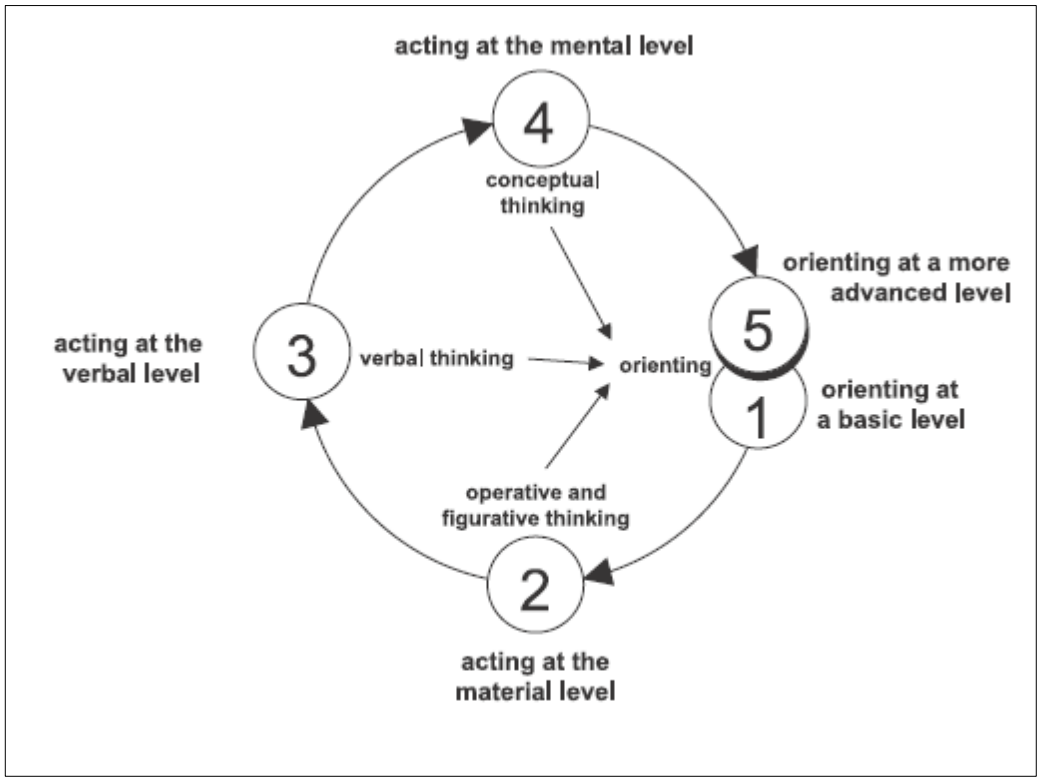


Figure 6: Haenen and Arievitch's spiral model, 2005, p.160

Arievitch and Haenen suggested that Gal'perin's Stepwise Procedure was better described as a spiral (Arievitch and Haenen, 2005) – *see figure 6 above*. In this spiral form it is possible to

identify how the student can move into a more advanced level. Arievitch and Haenen argued that by including a level five, an advanced level, the student comes to a 'better understanding of the actions they have learned because they have internalised actions and formed mental images which allow for performing actions in an abbreviated form.' (Arievitch and Haenen, 2005, p.160) Thus the student becomes more adept at not only performing the task but also understanding it materially, verbally, figuratively, and conceptually. They highlighted that Gal'perin emphasised the need to look ahead [orientation] as a precondition of the fully learned action. A student who is aware of the intended outcome and all the elements necessary should be able to complete the task better than a student who has no idea of the correct outcome or the elements needed. 'In contemporary educational psychology this ability is considered part of students' self-regulation because looking ahead leads to cognitive planning and monitoring.' (Arievitch and Haenen, 2005, p.162) They also made links between Gal'perin's model and reciprocal teaching models of 'Lave & Wenger, 1991; Rogoff, 1998, on the one hand, and that of knowledge acquisition and reciprocal cognitive growth e.g., Bandura, 1978; Cronbach, 1967; Resnick, 1994; Salomon, 1993, on the other. In effect, Galperin's approach predates recent calls for complementing, instead of contrasting, the metaphor of participation and that of acquisition e.g. Sfard, 1998; Stetsenko & Arievitch, 2002.' (Arievitch and Haenen, 2005, p.164). This evokes the nature of the collaboration in the classroom as essential for developing students' meta-cognition.

Galperin's theory seems to offer not only a kind of educational strategy but also a conceptual understanding of learning (Arievitch, I.M., 2020). In my experience teachers use scaffolding to support progression, but I have not seen any instances of teachers collaborating with the students to create a scaffold. Many schools and teachers are on the look-out for a good teaching strategy, one which might include scaffolding in order to attain high quality teaching and learning 'for maintenance of class achievement at top grade levels' (Gal'perin, P., 1989 (1974), p.82). Arievitch and Haenen's more recent (2005) circular model of Gal'perin's Stepwise Procedure, seems to show the possibility of progress and mastery over a period of time along with deeper conceptual thinking.

Gal'perin argued that his Stepwise Procedure and his SCOBA should enable students to produce work of a high quality and consistent standard (Gal'perin, P., 1989 (1974)). Arievitch and Haenen's model complements this theory by underlining the development of student meta-cognition of progression. Although both models include the verbal or Overt Speech stage and argue that this stage is an important part of meta-cognition and fostering automation of action, but neither appear to have expanded on how that could be developed for an educated discourse in the real classroom.

One British school that had recently (2014) developed educated discourse as a way of developing deeper learning is Mulberry School for Girls, in London. This school was part of the London Challenge initiative (2003 - 2008) (Claeys, Kempton and Paterson, 2014). and was considered a beacon of outstanding teaching and learning. Their teaching and learning project was based on research by Australian academics Martin and Rose who focused on scaffolding literacy in the classroom (Martin and Rose, 2015) and Halliday's research on language development and semiotics(Halliday, 1993). These researchers pointed to the need to develop a common language that teachers could use to teach a meta-language enabling students to access the educated discourse needed for their stage of education. 'We might interpret learning as an inherently semiotic process' (Halliday, 1993, p.94). If students are to learn and make progress, it was argued that students need to understand the technical language of education. Mulberry School's research showed how a similar meta-language used by all teachers across the school enabled easier transfer of knowledge from one subject area to another and thus students made more progress developing the quality of their writing and allowing them not only to access the curriculum language but also to harness it for themselves. Between 2010 and 2014 the school saw their percentage of A and A* grades double and 80% of students make targeted or better progress from KS2 to GCSE. (Mulberry, 2016)

Martin and Rose (Martin and Rose, 2015) developed their theory of teaching and learning based upon the use of a meta-language whereby students are enabled to deconstruct the discourse of semantic patterns. Their research arose from their involvement with the 'Disadvantaged Schools Program in Sydney's Metropolitan East Region' since 1994. Their aim was 'a more equitable order', to 'provide all students with access to resources' which they later describe as 'tools', (Martin and Rose, 2015) for success having discerned a literacy development curriculum which 'consistently disadvantages students from oral cultural backgrounds'.(Martin and Rose, 2015, p.4) They conclude that:

> 'From this theory we have developed semiotic tools to operate in the instructional discourse to provide learners with explicit knowledge about text in social context and in the regulative discourse, to provide teachers with the means to distribute this knowledge more equitably' (Martin and Rose, 2015, p.19).

This conclusion echoes Gal'perin's aim for his Stepwise Procedure, that it would enable consistent 'mass education'. (Gal'perin, P., 1989 (1974), p.80)

Within the Vygotskian sociocultural framework, the individual cannot develop alone. Vygotsky's view was 'It is through others that we develop into ourselves' (Haenen, 1996, p.72) Thus human

development relies on the social and historical influences, so that the learning takes place through social interaction on a cultural and historical plane, which Vygotsky called 'intermental.' Here there is a cooperative element in learning. A person, teacher or peer, teaches or enables another to gain more knowledge, or develop in understanding; it is not the skill formation that is important but the development function of the teaching learning process (Daniels, Cole and Wertsch, 2007). But for the semiotic tools, described by Martin and Rose (Martin and Rose, 2015), to be appropriated by the students, there is another step to an instructional discourse, to which Martin and Rose (2015) only allude and which Gal'perin appears to fill.

2.8 DEVELOPING MY RESEARCH QUESTIONS

Working as a practising secondary school teacher of English in the UK, as discussed in the context chapter, my research had to fit in with WS School plans, OFSTED criteria and be a continuation or development of the SV CLP Progression Project. Refer to my Context Chapter. At the beginning of my research journey, the general purpose of my action research project was to improve the quality of teaching and learning, through developing a common language to maximise student progress.

My literature review suggested that by using Gal'perin's theory and his Stepwise Procedure, students could develop a meta-cognitive understanding of essay writing, gaining 'class achievement at top grade levels,' (Gal'perin, P., 1989 (1974), p.82) and mastery of tasks and the development of an educated discourse, resulting in 'immanent power' (Brevik, Fosse and Rødnes, 2014, p.54).

Gal'perin's research had been conducted in primary schools with children as young as 6 years, he had not conducted any research in a secondary school but declared that his 'new technology and tools of cognitive ability [would enable] universal education on a high level [and] not [merely] reliant on the teacher's talent.' (Gal'perin, P., 1989 (1974), p.73) Nechaev, in 1972, conducted research in a university setting with adult learners. He showed that constructing an orientating chart or as he called it a 'tree of solutions' (Gal'perin, P., 1989 (1974), p.75) greatly aided the students understanding and memorisation of the vast array of different ideas, problems and associated laws. This left a gap in secondary schools which could be explored.

Gal'perin and his colleagues had conducted research in several topics: arithmetic, grapheme writing and grammar. Each of these topics, being taught to 6 year olds were, arguably simple in

concept, but the use of the Stepwise Procedure in the instruction of these topics showed remarkable progress when compared to a control group (Gal'perin, P., 1989 (1969)). (Refer to section 2.5). The subject used for Nechaev's research was far more complicated; a section of labour legislation (Gal'perin, P., 1989 (1974)). The success in both cases suggests that working with 14 year olds in secondary school on a complicated aspect of English language such as writing an essay, was feasible, if tricky. Even Gal'perin said that Nechaev's orientating card 'solution tree' was 'terrible to look at'. (Gal'perin, P., 1989 (1974), p.77) All the research showed that students were more confident and had developed better skills to transfer their learning and apply it to other areas of the curriculum. (Gal'perin, P., 1989 (1969))

Arievitch and Haenen's spiral suggested ways that the student could gain a deeper metacognition of the actions they are learning to perform, verbally, figuratively and conceptually (Arievitch and Haenen, 2005). It follows that if the student is more aware of the whole concept, progression and outcome of the action, or has a SCOBA then the student is more likely to be able to self-regulate leading to 'cognitive planning and self-monitoring' (Arievitch and Haenen, 2005, p.162). The student can participate in the educated discourse because that educated discourse is understood by the student. And this understanding and ability to talk about it enables progression.

My research questions developed from my desire to investigate whether Gal'perin's Stepwise Procedure could be used in a secondary school, year 9 class (aged 13), in the first instance to improve the quality of essay writing skills in English Language lessons and secondly to develop a common language for learning, which I will call an educated discourse, and thus make progress.

In the next chapter I will explain and describe how I conducted my study as a practising teacher in the classroom within which I was teaching to try to answer these questions.

2.8.1 My Research Questions

Research Question 1: How might Gal'perin's Theory of Systematic formation of actions and concepts and his Stepwise Procedure, including the SCOBA and orientating chart, enable students in a secondary school English Language lesson to develop their essay writing skills?

Research Question 2: How might using Gal'perin's Theory of Systematic formation of actions and concepts and his Stepwise Procedure, including the SCOBA develop or contribute to a common educated discourse for English language essay development in a secondary school?

3 METHODOLOGY CHAPTER

This chapter will attempt to use to use 'thick description' (Denscombe, 2010, p.271) through narrative and explanation of my methodology during my data collection period. I will start by explaining my theoretical framework behind my methodology. I will then explain my data collections methods, which I have separated, firstly, into main data collection methods and secondly, the methods of how I implemented Gal'perin's Stepwise Procedure – which I will now refer to as SWP – within the classroom. I have included a separate section for Gal'perin's SWP because I wanted to make it clear that my data collection methods were simple and easily transferable for other practising teachers. In the section about how I implemented SWP, I refer to my 'continual process of refinement' (Denscombe, 2010, p.271). The penultimate section of this chapter deals with the important topic of ethics and how I ensured data confidentiality. Lastly, there is a short section on validity and reliability which I also reflect upon in the discussion chapter and conclusion.

3.1 THEORETICAL FRAMEWORK

In this section I present an overview of the philosophical underpinnings to my methodology and my position as a researcher within my context. Firstly, I will reflect upon my research position as a practising teacher. I will, secondly, discuss the nature of the research questions and justify my choice of research method. Thirdly, I discuss my understanding of knowledge and my ontological stance.

As a practising teacher and part time PhD student, my research was conducted within the institution in which I was working at the time. It was a small, country town secondary school. (Refer to the Context chapter). When I broached the subject of PhD research in the school with the head teacher at the time, she was keen that the research I did reflected the school's ethos of professional development. Through negotiation it was agreed that a year 9 class was chosen because year 9 was a key year for developing essay writing skills before entering the GCSE course. Within the English Department curriculum at the time, a whole term was designated to essay writing and non-fiction writing development Being the middle year group within the secondary school, they were also considered to be more stable; not a year 7 who were new to secondary school, and not year 10 or 11 GCSE candidates; who were considered, by the head teacher, to be

already overwhelmed with the new style end of stage GCSE exams, which no longer included course work. We agreed that that year 9 students would be more able to cope with the innovative practices that I might be implementing, than perhaps the younger age groups might be. In addition, there is some tradition for studying year 9 in English classrooms (Mercer, N., 1995; Nystrand, 1997; Thompson, 2012); it is a stage of schooling, in the British system, which is considered preparatory for GCSE examinations; the curriculum covers the foundations ready for the examinations, and one such foundation in English is the form of the essay.

This put me as a researcher in a position which is odd, perhaps to an outsider, but very familiar to a practising teacher. I had chosen to do PhD research, had developed a research focus, which, as a practitioner, was constrained by the school within which I was working and the projects I had been asked to lead, refer to context chapter, and yet I did not have full control over the choice of my research participants. I could not be the teacher researcher embodying a 'creative resistance' against the 'hierarchical surveillance and control of teachers' practices' (Elliott, 1991, p.55) but I could focus on my position as a practitioner and 'take responsibility for improving and sustaining [my]self and the work [I was] in' (McNiff, 2010, p.20). For a practising teacher, the research must be fundamentally collaborative with the institution, as the very nature of school is a community of practice, learning and knowledge. The choices of the teacher researcher are shaped by the school's agenda and targets and 'constrained by what is permissible and ethical within the workplace setting' (Denscombe, 2010, p.82).

As a teacher and a researcher, I was central to my own research. As the central protagonist I was researcher, observer, and participant, in as much as the data collection was happening in my class and I was collecting that data and part of the data would originate from me as the practitioner. The quality of my participation was not within the scope of participatory research, of which I refer to on page 63, but it was that of a teacher and researcher, as in one who is teaching the class as well as collecting the data. My use of the word participant is used to acknowledge the influence I had upon my own class, and the data I collected from them and from my classroom. In most of this thesis, I will refer to my position as researcher practitioner, because I was researching my own practice. I decided not to use the term teacher researcher, as it could imply I was a teacher researching others' practice.

As a professional teacher, I was responsible for student progression in my class. One could argue this was a dichotomous and conflicting position. I was an 'insider' (Mercer, J., 2007; Cormier, 2018; Reyes, 2018) researcher studying the class I knew and taught within a school I was working in and had been working in for many years. The insider status predisposed my personal influence

and impact on my research and could lead to the challenge of bias in my reporting and interpretation. I was 'aligning my self-interests with my research' (Berkovic et al., 2020, p.1) an important position, to influence others and develop my own practice within an institution; this could lead to a positive bias in my reporting and data interpretation. However, the benefits of my insider status, perhaps can be balanced against this. Being an insider gave me some credibility with the other participants, such as the year 9 students, who knew me as a teacher and trusted me to teach appropriate material to support their progression. I had credibility with other colleagues, who were not quite part of the research but periphery, and as such validated, supported, and developed ideas with me. In addition, I was able to build, and with some already had, a rapport with the students and I benefitted from collegial relationships with the staff; and my knowledge of the context allowed me to 'pick up on cues, linguistic or contextual that outsider researchers may not notice' (Cormier, 2018, p.329).

However, my school status and my position of power in the classroom put me into the 'third space, never entirely an insider or an outsider but working in between the two' (Cormier, 2018, p.331). I was an insider within the institution but an outsider in many ways to the students with whom I was working. The year 9 class was not my age, did not have my experience and many did not have my sociocultural background or gender (Reyes, 2018, p.222). I could not fully appreciate their socio-cultural viewpoints. My role as teacher, within the class also created a power differential to be negotiated. It was important that I was aware of how that might influence student responses; the way I interpreted their responses and the way I implemented my data collection within the class. To embody this 'third space'(Cormier, 2018, p.331), involved a complex and tenuous balancing act, always being mindful of the potential to underplay my bias towards my research.

To mitigate against the disadvantages of being an insider researcher, I attempted to 'bracket' my research using a research journal and regular meetings with my supervisor. Berkovic explains bracketing as being a technique of 'explicitly noting one's own beliefs and interaction with the research topic in an attempt to remain impartial …[and thus maintain] rigor and trustworthiness in the conclusions drawn' (Berkovic et al., 2020, p.2). The act of 'bracketing' served as an active reflexivity, as suggested by Soedirgo and Glas, whereby I endeavoured to 'interrogate my positionality, how that positionality was read by others and the assumptions about my conclusions in the first two stages' (Soedirgo and Glas, 2020, p.547). But as Justine Mercer (2007) argues there is more than one dimension of the insider/outsider dilemma. Firstly, there are the innate similarities and differences: gender, sexual orientation and ethnicity; a second dimension is that which changes during data collection such as age, time, place, power relationships; and yet another dimension is that of personality, varying relationships, rapport and even the way

different people regard certain topics (Mercer, J., 2007). Mercer finally comments 'the researchers relationship with the researched is not static, but fluctuates constantly, shifting back and forth on a continuum of possibilities'(Mercer, J., 2007, p.13). It was important to me, to be aware of my influence as an insider on my own research, although Mercer (2007) commented that there is little research conducted in this field to evidence how substantive a problem it really is.

As a classroom practitioner researcher, I was essentially going to influence my research subject, due to my interactions and my participation. I was conducting research as an inquiry into my own practice, 'undertaken as part of [my] practice and not a bolt on addition to it' (Denscombe, 2010, p.127). Denscombe described this type of practitioner research as a cyclical process of research which feeds directly back into the practice, is reflected upon and initiates changes, creating an ongoing process. This recognition of the reflective cyclical process led me to acknowledge that my research could be developed as a piece of action research (Denscombe, 2010). Action research is an evaluatory process of self, project and participant, and the reflexive and circular nature of action research seemed to complement Gal'perin's Stepwise Procedure.

Gal'perin created his Stepwise Procedure as a form of educational instruction that developed Vygotsky's cultural-historical approach into something that teachers could understand and use in the classroom; he was passionate about enabling the 'desired level of mass education' (Gal'perin, P., 1989 (1974), p.80). By using Gal'perin's theory as my research focus, I placed myself within the Vygotskian sociocultural and activity theory framework. Gal'perin's Stepwise Procedure places emphasis on the mediated nature of learning, using teacher and peers and the importance of talk as a semiotic tool within the learning process. However, since Gal'perin's aim, according to Haenen, was to 'transform' Vygotsky's approach into a 'technology of instruction' (Haenen, 1996, p.123), my theoretical framework expands beyond a purely Vygotskian framework into a 'post-Vygotskian account of mediation' (Daniels, 2001, p.173).

Vygotsky's theory was that human consciousness moved from a social level to an internal level through mediation; the Zone of Proximal Development, ZPD; and that language was a prime tool or 'semiotic mediation' (Daniels, 2006). My research aimed to investigate how Gal'perin's theory, implemented in the English Language classroom, might enable students to develop their essay writing skills and the educated discourse connected with that process. This post-Vygotskian framework helped identify my influence on my research as it recognised the 'code regulated dominant and dominated communication,' (Daniels, 2006, p.47) namely the educated discourse connected with essay writing, that I was trying to promote in the classroom. This created another

complex balance of promoting the educated discourse, which I believed might support students to make more progress; while at the same time recognising that this dominant communication would influence the students due to my position of power and control in the classroom; while trying to analyse and document their response to Gal'perin's SWP.

The complexity of the research I was undertaking, together with my position of practitioner researcher, led me to consider action research as my methodological choice. 'Action research … constitutes a form of inquiry which fully acknowledges the realities which face practitioners in all their concreteness and messy complexity' (Elliott, 1991, p.52). Action research would necessitate a full meticulous description of my research journey enabling me to document my interaction, my mediation, and my participation.

In addition, the choice of action research mirrored Gal'perin's repetitive process and Arievitch and Hanean's (2005) circle of development. Arievitch and Haenen showed how each repetition established more meta-cognition until the process within the student is automation and mastery. The action researcher practitioner must reflect and evaluate to understand; this is described by Winter (1998) as a reflexive dimension and as such negates the strict barrier between researcher and the observed:

> 'action research will always have a 'reflexive' dimension… [we are] inquiring into our own practice, the impact of our engagement, the nature of our commitment. Action research thus undermines the simple distinction between the researcher and the researched' (Winter, 1998, p.362).

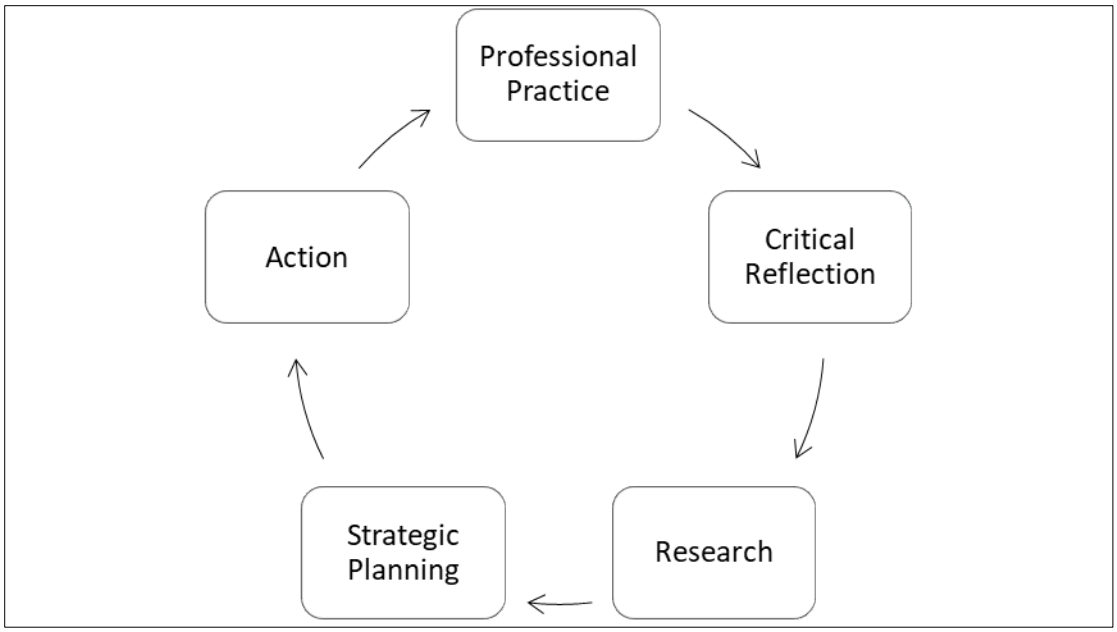


Figure 7: Denscombe's cyclical process of action research (Denscombe 2010 p76)

Denscombe's action research model, see figure 7 above, shows the cyclical process, highlighting how the teacher reviews professional practice through critical reflection and research, a systematic and rigorous enquiry, involving dialogic and textual interaction, before coming to a renewed understanding of the practice or advancing into a deeper understanding. The critical reflection needs to be both reflexive and as rigorous as possible. This type of action research leads to a qualitative study because 'interrogating our own positions as researchers remains an essential task of qualitative research, because reflexivity 'affects both writing up the data . . . and the data's status, standing and authority' (Reyes, 2018 quoting: Brewer, 2000 p127) In Bassey's words I am an 'interpretative researcher'(Bassey, 1999, p.43). The reality of the data is interpreted by me, through critical reflection, in a way which might be different from my colleague or my supervisor. 'People perceive and so construe the work in ways which are often similar but not necessarily the same' (Bassey, 1999, p.43). This encouraged me to take an active interrogative perspective on my data. In using the circular models of both Denscombe and Gal'perin, my own reflective enquiry into my own practice would facilitate a renewed and meta-cognitive perspective of my own research. And I hoped that the research I conducted might influence good practice within WS school and have, perhaps, lead to some change as McNiff argues, Action research '[has] the capacity to influence the process of social change' (McNiff, 2010, p.20).

There were alternative approaches to my methodological choice. One of my options was Participatory Action Research. My initial consideration was that I was a researcher analysing data from my own classroom where I participated in my own research and collaborated with others, such as the students and other staff, in order to produce that data. Schubotz states that 'the core of PAR projects is the triad of action, participation, and research,' (Schubotz, 2020, p.3)which suggested, at first, a PAR approach. However, (MacDonald, 2012)makes a distinction between Action Research and Participatory Action Research (PAR), 'PAR was developed as a means for improving and informing social, economic and cultural practices' with the aim of 'providing freedom from oppressive, debilitating conditions' (MacDonald, 2012, p.39). He argues that PAR is more of a political collaborative force than plain action research, even though Elliot writing in 1991, argued this for action research, stating that it 'constitutes a form of creative resistance because it transforms practice' and 'is a growing response to the hierarchical surveillance and control over teachers professional practices' (Elliott, 1991, p.49).

My consideration, therefore, was the type of research I was undertaking; my research was investigating how Gal'perin's theory could be applied in the classroom and to analyse the effects of that theory on the essay writing and educated discourse of the students. This was primarily a pedagogical study focused on 'aspects of [my] own practice [teaching essay writing] as [I] engaged with my own practice' (Denscombe, 2010, p.75) and incorporated Gal'perin's theory into that practice. Advocates of PAR argue that PAR seeks to 'capture the voices and experiences of underrepresented, marginalised, or hard-to-reach groups in society'(Schubotz, 2020, p.4) Although I was recording and listening to the students' responses to Gal'perin's SWP, my focus was not their experience of it, in an interpretative phenomenological stance, I wanted to analyse the language they were using and how that reflected the educated discourse of essay writing. In addition, David Coghlan and Teresa Brannick (2014) (cited by: Schubotz, 2020, p.4) 'point out that apart from its emancipatory and egalitarian approach, the unique feature of PAR approaches compared to AR more generally is that PAR typically focuses on an issue outside the organisation and/or community which is involved in the project'. Notably, my research was focused on the classroom and involved the students developing their essay writing skills, taught by me, practitioner researcher as part of the core curriculum plan for year 9 students in WS School in English Language lessons. This indicated that action research was a better fit than Participatory Action Research.

Kemmis 2009, argues for the transformative nature of action research, in a similar way to Elliot (1991), but Kremmis focuses on self-transformation and the way that transformation implicitly affects those around us:

> 'Transforming our practices means transforming what we do; transforming our understandings means transforming what we think and say; and transforming the conditions of practice means transforming the ways we relate to others and to things and circumstances around us' (Kemmis, 2009, p.463).

This acknowledgement of transformation of the researcher practitioner's practice, complements Daniels's (2006) Post-Vygotskian views of the nature of speech and how the changes lead to meta-cognition. The innate essence of learning is through others, and in analysing how, why, and what transforms in relation to others, we become meta-cognoscente of learning.

In choosing action research I had to acknowledge some of the disadvantages, as well as the advantages of this methodological choice. Hargreaves offers some harsh comments on educational research, cited by Bassey (1999), where he decries the lack of 'scientifically sound research' which despite 'huge amounts of educational research conducted in the past fifty years', he argues few can be considered a 'worthwhile resource to guide professional action'. (Bassey, 1999, p.11). This appears to put qualitative action research into a marginal place where although it might bring benefits for me as a practitioner and enable self-development, its scope is small, context bound and liable to biased interpretation and could perhaps be argued to be less than impartial or detached in its analysis, and arguably not be the type of research Hargreaves might have thought was 'scientifically sound'.

However, it is accessibility of action research for a practising teacher, which makes it 'worthwhile'; it facilitates the practitioner to research his / her own practice, make changes and learn from that research. Action research feeds 'directly back into practice' (Denscombe, 2010, p.81), and would enables practitioners, like me, to develop and make improvements in my own practice and share that good practice with others in the institution. Although the small nature of the study, the context and scope of the study could limit the extent of the generalisations, to which I refer to later in this chapter, the actuality of its small size, its context within a real school environment and its achievability make it all the more manageable for a practising teacher.

Furthermore, the cyclical approach of action research resonates with Galperin's step by step approach and Haenen and Arievitich's circle of meta-cognitive development (Arievitch and Haenen, 2005). The circular action of plan, implement, analyse and the development and refining of the implementation, as defined by Lewin and interpreted by Kremmis (1980)(cited by: Elliott, 1991, p.70) reflects Gal'perin's theory and how it might be implemented in the classroom. Elliot argues that analysis should 'constantly recur in the spiral of activities' within action research;

Lewin and Elliot call this 'reconnaissance'; fact finding though an analysis of the steps, and evaluation of any failures and effects of an action (Elliott, 1991).

My research investigation was of how Gal'perin's Stepwise Procedure contributed to the students' meta-cognition of essay writing and the development of educated discourse. I wanted to investigate how Galperin's theory supported the students' progression. I wanted to ensure I had a full meticulous description of the student's journey enabling me to analyse their interaction and participation and cross-reference that with my input, influence, and interaction. This could have led me to do a phenomenological study of the student experience, but my research was more pedagogical in design and investigated how Gal'perin's theory was applied in the classroom. A phenomenological approach would have led me to investigate the way the students 'interpret events and literally make sense of their personal experiences' and present it in a way that was 'faithful to the experience' and enable the reader to understand the experience through the eyes of the student.' (Denscombe, 2010, p.98). Alternatively, because I wanted to investigate the students response, I could have considered an ethnographic study giving a holistic approach while stressing the interconnectedness of 'processes, relationships, connections and interdependency among the component parts' (Denscombe, 2010, p.85). An Ethnographical study, although supporting the Vygotskian sociocultural and activity theory framework, from which Gal'perin's theory arose, and would have necessitated detailed description, depth and intricacy of interconnectedness of culture and events, it would have taken me even more into the realms of student experience and further away from my aim of investigating how Gal'perin's theory impacts the progress of essay development and educated discourse.

Although I wanted to chart the students' journey, my interest was in their essay writing and educated discourse progress, I intended to examine how Gal'perin's theory impacted their progress. It was more of an 'examination of the extent to which the programme's stated objectives [ensuring automation of essay writing in the students] had been achieved' (Bassey, 1999, p.63).And Bassey advocated that case studies were the prime choice to examine and compare this kind of development against the stated objectives. I wanted to be able to make some generalisations of how students reacted, responded, and progressed through the use of Gal'perin's Stepwise Procedure in the classroom. I thus chose to do three case studies from this class of 23 students. I chose one student who had progressed a lot and was top of the progression leader board; one who appeared in the middle of the progression leader board and one from the bottom. Two were female and one male. The three case studies enabled me to compare and 'explore significant features' (Bassey, 1999, p.58) of the Stepwise Procedure and how, despite differences in gender, socio-cultural background and heritage, there was a 'worthwhile argument'

to be had and 'plausible interpretations' to make (Bassey, 1999, p.58).These in depth case studies also enabled me to focus on dialogic development of language in the classroom and explore the relationship between their developing educated discourse and their essay writing skills. The comparison of case studies enabled me to analyse the interconnection between the power of the mediator and the response of the subjects to the tools, the mediator, and the different aspects of Gal'perin's Stepwise Procedure. My meaning making, or interpretation, came from both insider and outsider perspective, controller and practitioner, teacher, and researcher.

My position as the researcher was one of 'messy complexity' (Elliott, 1991, p.52). I was an insider / outsider somehow occupying a 'third space'(Cormier, 2018); I was a practitioner researcher with influence over my data. My research perspective was 'messy'; I had chosen action research conducted in a classroom by myself as the teacher collecting data whilst ensuring student progression and adhering to school ethos. My research focus was 'messy complexity'; it involved the complex task of writing essays and collecting data of educated discourse involving qualitative interpretation, inevitably leading to me, the researcher being an 'integral part of the analysis' (Denscombe, 2010, p.268) and opening up my conclusions to the 'possibility of more than one explanation being valid' (Denscombe, 2010, p.218). My data was qualitative, and I was the investigating teacher implementing Gal'perin's Stepwise Procedure in an active classroom, in my classroom.

In order to adapt to all this complexity, my interpretative stance would have to be adaptive; I recognised that my interpretation was provisional and might even fluctuate. Adaptive interpretation would be filtered through the conduit of the 'provisional nature of [the researcher's] beliefs' (Pring, 2007, p.156). This indicates, that ontologically, I was positioning myself within pragmatism.

> '[The pragmatist] is not waiting passively for further experiences; he or she is active seeking perceived goals or ends-in-view, and having to adapt to, and to interpret, experiences as they occur.'(Pring, 2007, p.149)

Pring develops C.S Pierce's (1839 – 1914), pragmatist philosophical position and his views of the interrelated concepts of 'belief', 'truth', 'inquiry' and 'meaning'. (Pring, 2007, p.150) For example, he postulates that: when 'belief' is challenged by doubt due to an unexpected outcome, it forces further activity to resolve the doubt and return to 'belief', while perhaps in the process altering or 'reforming' the 'belief' to fit with the new results. The 'inquiry' undertaken, due to the doubt, is to test a new hypothesis suggested by doubts in the former 'belief' and test them against experience. The pragmatist does not require truth as a certainty since the 'inquiry' will give the

inquirer a justifiable reason to reform 'belief', once more, until that person yet again doubts and thus another wave of inquiry and meaning making will ensue. The 'meaning' making is intrinsically woven into practice; it informs and is informed by that practice. It must have a bearing on practice if it is to have any 'meaning' at all. But the 'meaning' is not the inquirer's alone; meaning is made and understood by the community or social group within which the 'inquiry' started.

The task of writing an essay does not always have successful outcomes; this is the manifestation of 'doubt'. The 'inquiry' is set up and developed to make 'meaning' for the social group through the implementation of Gal'perin's Stepwise Procedure; teacher and more able peers act as mediators; while making the teacher and students participants; so that a more successful way of completing the task can be developed and a reformed belief in how to complete that task is concluded. This communal dependence on learning, resonates with Vygotsky's sociocultural theory of learning and the mediating factors of the teacher with students and material implements, be they verbal or object. Gal'perin's Stepwise Procedure is a sequence of interrelated actions reflected in the pragmatist philosophical framework: the close connection between action, performance, participants, and consequence.

This qualitative research being gathered in a fluctuating and multi-positional dimension, from a practitioner researcher position are specific to my circumstances. The meanings I made were part of my reflections on data collection gathered by a white, middle class teacher in a predominately white country secondary school in the UK. I was aware there would be alternative explanations and my interpretation only general, in as much as my findings are my findings, a creation by me as researcher in my context (Denscombe, 2010). My generalisations might be too specific, and my findings should be viewed with caution. I hope, however, that I have constructed a mapped trail that future teacher researchers might be able to follow to do similar research in their classroom.

In this section I have given an overview of my philosophical underpinning and my positionality. In the next section I will explain how I developed my research and data collection plan to investigate how Gal'perin's Stepwise Procedure might contribute to the development of essay writing skills, educated discourse and metacognition within a secondary school classroom.

To recap on my research questions:

Research Question One: How might Gal'perin's Theory of Systematic formation of actions and concepts and his Stepwise Procedure, including the SCOBA and orientating chart, enable students in English Language lessons to develop their essay writing skills?

Research Question Two: How might using Gal'perin's Theory of Systematic formation of actions and concepts and his Stepwise Procedure, including the SCOBA develop or contribute to a common educated discourse for English language essay development in a secondary school?

3.2 DATA COLLECTION METHODS

In this section I will detail my data collection methods, explain why these different methods were used and how I thought they would enable me to answer my research questions. I will begin by giving an overview of the action research cycle and time frame and an overview of SWP stages and the different data collection methods I used. Five of the data collection methods proved essential throughout SWP and my research cycles: the research journal; staff collaboration which created the essay criteria assessment chart; the questionnaires; the student essays; and the student sound recordings. Due to their importance in my research, I start by explaining how I developed and used them to collect data. I have then created a section on Gal'perin's Stepwise Procedure and the different data collection methods I employed for those specific stages and my reasons for choosing them. Throughout this Methodology Chapter I will also describe my reflections on each process, my methods on analysis and the ways I tried to ensure trustworthiness and reliability.

Time / date	**Detail of activity**	**Reason**
October *two lessons*	Baseline Collection	To establish a baseline of student skill
November & December *15 lessons*	Gal'perin's Stepwise Procedure One	Action Research Cycle one
February & March *12 lessons*	Gal'perin's Stepwise Procedure Two	Action research cycle two after reflection on cycle one

Figure 8: Overview of the sections of my data collection period

My data collection period started in October 2016 and ended in March 2017. (Refer to figure 8 above). This was not a continuous period of data collection, as I also had the responsibility for teaching a certain curriculum during the academic year. Their curriculum included how to write essays, but also included literature study, comprehension, and poetry as well as other non-fiction styles of writing. Therefore, I only had time to include three distinct periods where I collected data. (See figure 8 above). The initial period was one of a baseline collection. Here I collected data to show a baseline of the students' ability, knowledge and understanding concerning essay writing and their educated discourse of essay writing. When conducting the SWP for essay writing, I ensured I mirrored the data I had collected for the baseline period. After this first round

of implemented action research, I reflected upon the outcome and the students also reflected upon their achievements. The third round of data collection stemmed from this reflection, where, again, I mirrored the data collection methods, there were some changes that I implemented due to the reflective process of action research, and these provided insight into the progress of the students. This fitted in with the action research cyclical process of plan, do, review, or in Denscombe's model: Reflect; research; plan; action; practice (Denscombe, 2010).

Galperin's Stepwise Procedure	My Data Collection Methods
Motivational Stage	Research Journal Student physical response to stimulus Questionnaires Student aims for improvement
Orientating Stage	Research Journal Student notes on Expert Essays Orientating charts Recording of staff discussion Questionnaires
Materialized Stage	Research Journal Student notes Questionnaires
Stage of Overt Speech	Research Journal Student Sound-bites Student Group discussions recorded Group orientating chart Questionnaires
Stage of Covert Speech	Research Journal Student Essays Questionnaires
Mental Stage	Research Journal Student Essays My assessment using essay assessments criteria chart Colleague assessment of student essays Questionnaires
Additional Step created by Arievitch & Haenen (Arievitch and Haenen, 2005). Critical Reflection	Student reflection on essays and aims for improvement Researcher review and reflection Evaluation questionnaires Student interview

Figure 9: Overview of data collection methods

Gal'perin, specified six steps for his SWP that must be taken in sequence if mental action was to enter an unconscious and meta-cognitive understanding (Haenen, 1996, p.133). In figure 9 above I have given an overview of the data collection methods I employed in each of SWP stages. As an action researcher I intended to complete Gal'perin's Stepwise procedure twice to ensure critical reflection between the action research cycles. The reflexive action makes the cycle perhaps more like the fifth step of Arievitch and Haenen's spiral model (Arievitch and Haenen, 2005) (refer to Literature Review Chapter section 2.7) and would serve as a critical reflection for the purposes of action research cycle and an advanced orientating basis for the students, as they reflected upon what they had learnt and how to improve their own practice (Markova, 1990; Dweck, 2000; Arievitch and Haenen, 2005). I start by explaining five most important methods of data collection which I used throughout SWP: the research journal; staff collaboration which created the essay criteria assessment chart; the questionnaires; the student essays; and the student sound recordings.

3.2.1 Research Journal

In order to keep track of what I was doing, what stage of the research I was at and what I noticed within the classroom, I kept a research journal. (Refer to figure 10 for an example).The research journal provided chronological detail of what I had done when. Within this linear journal I tried to keep notes on the socio-cultural dimensions, such as students absent of present and my observations of them. I also added a column for my comments or interpretations of what I was observing or doing at the time.

I used my journal at all stages of SWP and all three parts of my data collection cycles.

Date	Facts Lesson	Facts students	Observations	Interpretations
8-12-16 P1	Silent essay writing. On their desks I put their customized orientating chart and their exercise books in which they written their plan yesterday. I rearranged the seating plan and put them in different places and next to different people.	All students present. They arrived appearing ready and expecting the lesson arrangements, the silence and the aim. Two students asked for pens, which were supplied by other students. One girl, Zoe, asked for the apprentice info sheet at 8.51. Lottie went to blow her nose in the toilet for 4	One boy, Kim, appeared not to look at his chart as he left it face down on his desk the whole lesson, he did however, look at the information sheet. One girl, Mia, spent a lot of time with her face cupped in her hands. When I asked her quietly if she was OK, she said yes. I saw the following student actively looking at their chart: Jemma; Naruto; Zoe, Richard, Bean,	It is going to be most interesting to find out what they thought about the orientating chart and whether it helped them, how much they used it, what exactly they used on the chart, what they really wished was on the chart. I might need to check how many other essays they have written apart from in my class. To identify if they have had other teaching on essay writing. In addition,

		mins. Mia left to use toilet for 4 mins. Two students asked me if they could make up false facts. Mia continued to look unengaged for the whole lesson. I will ask her at the end what was up.	Jessie, Claire, Alexa, Juan, Monika, Jay, Robin, Robert, Lottie, Vanessa Juan asked me how he could refer to personal experience – pointing to a section in the chart	looking and reading their essays and comparing them to their baseline essay will be illuminating too. Has their essay writing improved? But of course I also want to know if it is helping them in other lessons. So perhaps I can add that onto the evaluation chart. I decided to give them the evaluation before the end of the lesson, so that they could think immediately about how the chart had helped them. I thought if I left it until Monday they might find they couldn't quite remember.

Figure 10: an example of one lesson in my research journal. All words included were written on the day of the lesson and are not abridged for this example.

Rather than splitting the journal page into two as McNiff suggests (McNiff, 2010) I split the page into four sections: Facts – lesson; Facts – students; Observations; Interpretations (Refer to figure 10 above). I was thus able to include factual detail, some description, and some self-reflection. The use of the word 'fact' in these two columns, was designed to support my bracketing, in that the facts were to serve as a reminder of what contents I included in the lesson, and which students were in or out of the lesson. It served to, perhaps, 'scaffold my understanding' of the development of the research(Pollard, 2002, p.49) and was an attempt to 'bracket' (Berkovic et al., 2020) my research, so that rather than merely relying upon my interpretations of the lesson, I had notes on what the lesson entailed and who was there. The interpretations I included in the journal were written at the time, or just after the lesson had concluded; the longest period was five hours after the lesson had concluded. The notes therefore on those days were written in a vaguer narrative style with less detail. This is one of the downsides of being a practitioner researcher rather than an observer researcher. The combination of all four parts of my journal, overall, enabled a more thorough reflexivity and interrogation of what had happened and what I had done. It also served as a constant reminder of my position as both researcher and practitioner . On occasion, I found my notes were too short and did not include enough detail to be rigorous in the conclusions I drew from them. There were times during the writing up process, when I wished I had recorded

or filmed the lessons, so that perhaps watching it after the event, I might have developed, perhaps, a more trustworthy and objective interpretation.

The most important aspect of keeping a research journal of this type, was that it enabled me to keep the chronological development in mind; and identify my 'changing understanding',(McNiff, 2010, p.69)even within the lessons themselves, or as a response to the students' engagement within the lesson. This raw data was vital in the process of reflection and development of the SWP2.

To analyse my research journal, I used colour coding. Firstly, I colour-coded the different sections of data collection; this is because I wrote the journal every lesson, I took Year 9 throughout the year 2016-2017, not just on the days when I was data collecting for the research. I did this because I surmised it would become a habit and I would not forget to do it when the research was in full swing; my summation, overall, was correct. I then colour-coded the six stages of SWP, so that I could immediately refer to those stages when I was reflecting and 'identifying patterns, processes, commonalities and difference' (Quoting Miles and Huberman, 1994, p.9: Denscombe, 2010). In particular, the research journal supported the development of the case studies, as I had referred to individual students within the journal. I colour-coded each of the three case study students where I had mentioned them in the journal, and I was thus able to identify the chronological development of the students and any comments I had made during the lessons. Keeping a research journal proved an essential aspect of this action research and the development of the 'thick descriptive' (Denscombe, 2010, p.271) narrative that I have been able to weave through this thesis.

3.2.2 Staff Collaboration and the Essay Criteria Assessment Tool

A teacher does not work alone, no matter how isolated one might feel behind the classroom door, there is a community of staff, both teaching and non-teaching, in school, which forms and perpetuates the ethos and beliefs of that school. Within the socio-cultural paradigm and due to my choice of action research, the participation and collaboration with others was an important part of the process. '[Having] the capacity to influence the process of social (McNiff, 2010, p.20)is not merely amongst staff and colleagues, but also in the classroom affecting the students. This research was collaborative firstly with staff who helped develop an essay criteria assessment sheet and secondly with the students as I became the mediator of the students' learning during the Stepwise Procedure and they, the students, collaborated with me in creating the orientating chart and evaluating their own progress.

My research focused on how the students developed their essay writing and the educated discourse surrounding the essay writing, using SWP. One of the most important tasks at the start of my research was to establish what an essay looked like: its content, structure, tone, and voice. Once I had established this, I could then assess whether the students had progressed their essay writing skills. The English Department at WS School consisted, at the time, of six teaching staff members. I asked these staff if any were willing and able to contribute to the research. Two responded and I recorded our 13 minute discussion. 'Teachers contribute as equals, bringing specialist knowledge unavailable to 'outsiders' and that knowledge and theories from key thinkers in a range of disciplines could inform and enrich teaching, research and life itself' (Somekh, 2003, p.250). It was a key decision to use colleagues at WS school to collaborate with the essay assessment criteria, as they too were insiders and together, we were able to create something suitable and appropriate for both my research and the environment within which it would be used.

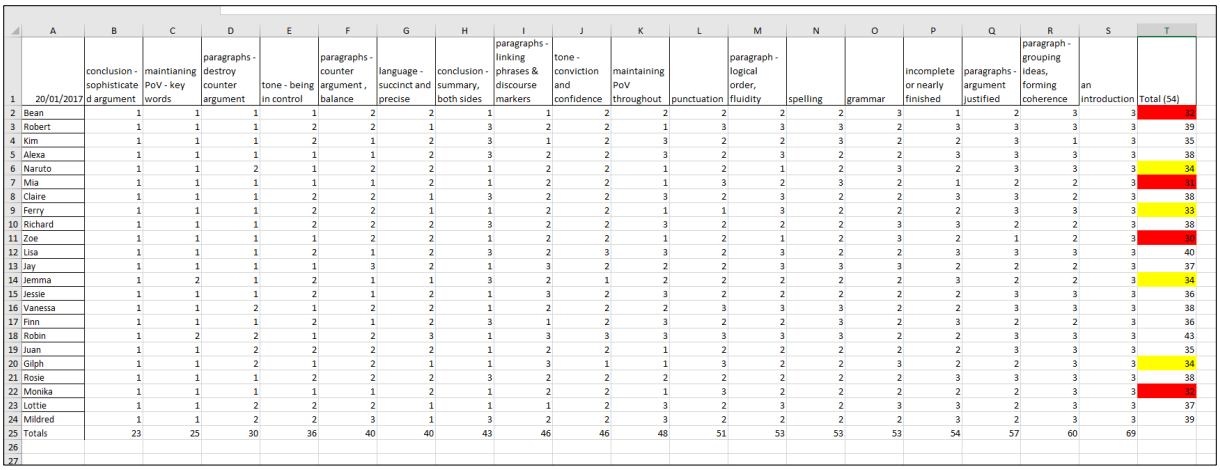
Penelope and Julia (pseudonyms) were the two colleagues I met with to establish the elements of a cogent and well-structured essay. I audio-recorded our 13-minute discussion about a set of elements that we expected to identify in an argument essay. I asked them what an essay should look like: 'What do we as teachers expect an essay should include?' 'If they are doing an argument essay would there be different things you would get them to include in the essay?' 'What would we be expecting at the end of the essay and what would that look like?' 'How do you judge an essay which is higher grade to a lower grade?' 'Are there other things that would help us to understand that this is a high grade essay?'

Essay assessment criteria	
An introduction – focus to ground the whole essay	
Paragraph structure: Linking phrases – discourse markers	
Paragraph structure: grouping ideas – forming coherence	
Paragraph structure: logical order for ideas; fluidity	
Paragraphs: your argument justified	
Paragraphs: counter argument / balance	
Paragraphs: destroy counter argument / bias	
Conclusion: summary / both sides	
Conclusion: sophistication of argument	
Language: succinct, precise	
Tone: Conviction and Confidence	
Tone: of being in control of the essay	
Maintaining Point of view throughout	
Maintaining Point of view: Key words	
Spelling	
Punctuation	
Grammar	
Completed essay	

Figure 11: Essay Criteria Assessment Tool

This conversation was then transcribed and coded into the elements we three teachers agreed were essential to essay writing. From these elements I created an essay criteria assessment tool (ECAT). (Refer to figure 11 above). I then showed the ECAT to my two colleagues who agreed it was a satisfactory overview of our conversation and would enable good assessments of the essays. This ECAT proved very useful for my research. Not only did I use it to assess all the essays written by the students in the data collection period, but it also formed a basis for the development of the expert essays. In addition, it gave me a coding pattern with which I could then categorise all the raw data I collected and develop a system of analysis and comparison.

Firstly, I used the ECAT to assess the essays written by the students. I designed a simple method of giving a tick, if a student had achieved the criteria; a cross, if the criteria was not present at all in the essay; or a comment such as: mostly or attempted, if I could see that the student had attempted to include or had included it in part of the essay. My aim was to keep it simple and manageable because as a practising teacher this marking for my research was on top of the school expected marking and the assessment different to that normally expected by the school.



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	20/01/2017	conclusion - sophisticated argument	maintianing PoV - key words	paragraphs - destroy counter argument	tone - being in control	paragraphs - counter argument , balance	language - succinct and precise	conclusion - summary, both sides	paragraphs - linking phrases & discourse markers	tone - conviction and confidence	maintaining PoV throughout	punctuation	paragraph - logical order, fluidity	spelling	grammar	incomplete or nearly finished	paragraphs - argument justified	paragraph - grouping ideas, forming coherence	an introduction	Total (54)
2	Bean	1	1	1	1	2	2	1	1	2	2	2	2	2	3	1	2	3	3	32
3	Robert	1	1	1	2	2	1	3	2	2	1	3	3	3	2	3	3	3	3	39
4	Kim	1	1	1	2	1	2	3	1	2	3	2	2	3	2	2	3	1	3	35
5	Alexa	1	1	1	1	1	2	3	2	2	3	2	3	2	2	3	3	3	3	38
6	Naruto	1	1	2	1	2	2	1	2	2	1	2	1	2	3	2	3	3	3	34
7	Mia	1	1	1	1	1	2	1	2	2	1	3	2	3	2	1	2	2	3	31
8	Claire	1	1	1	2	2	1	3	2	2	3	2	3	2	2	3	3	2	3	38
9	Ferry	1	1	1	2	2	1	1	2	2	1	1	3	2	2	2	3	3	3	33
10	Richard	1	1	1	2	2	2	3	2	2	3	2	2	2	3	3	2	2	3	38
11	Zoe	1	1	1	1	2	2	1	2	2	1	2	1	2	3	2	1	2	3	30
12	Lisa	1	1	1	2	1	2	3	2	3	3	2	3	2	2	3	3	3	3	40
13	Jay	1	1	1	1	3	2	1	3	2	2	2	3	3	3	2	2	2	3	37
14	Jemma	1	2	1	2	1	1	3	2	1	2	2	2	2	2	3	2	2	3	34
15	Jessie	1	1	1	2	1	2	1	3	2	3	2	2	2	2	2	3	3	3	36
16	Vanessa	1	1	2	1	2	2	1	2	2	2	3	3	3	2	2	3	3	3	38
17	Finn	1	1	1	2	1	2	3	1	2	3	2	2	3	2	3	2	2	3	36
18	Robin	1	2	2	1	2	3	1	3	3	3	3	3	3	2	2	3	3	3	43
19	Juan	1	1	2	2	2	2	1	2	2	1	2	2	2	2	2	3	3	3	35
20	Gilph	1	1	2	1	2	1	1	3	1	1	3	2	2	3	2	2	3	3	34
21	Rosie	1	1	1	2	2	2	3	2	2	2	2	2	2	2	3	3	3	3	38
22	Monika	1	1	1	1	1	2	1	2	2	1	3	2	2	2	2	2	3	3	32
23	Lottie	1	1	2	2	2	1	1	1	2	3	2	3	2	3	3	2	3	3	37
24	Mildred	1	1	2	2	3	1	3	2	2	3	2	2	2	2	3	2	3	3	39
25	Totals	23	25	30	36	40	40	43	46	46	48	51	53	53	53	54	57	60	69	
26																				
27																				

Figure 12: Example of my excel spread sheet with the numerical data created from the ECAT

This simple system then allowed me to analyse the data in a numerical approach. I converted each mark into a number: a tick become three; a cross became one; and a maybe / almost became two. Thus, from the 17 criterion there was a maximum possible score of 54 points. By using Microsoft Excel, I exported the data for each assessment onto a spreadsheet. (Refer to figure 12 above). The numerical data I was now able to view, gave more an easier way to analyse the essay achievements and progress of each student. To enable this analysis, I used MS Excel to create bar charts of the results. They provided an instant view of the students' progress and allowed comparison of the students developing skills.

The ECAT was modified during my data collection period. As part of my reflection process within the action research model, I realised, after the SWP1 essay had been written, that I need to include whether the students seemed to have used the orientating chart. I thus changed the last criterion from: 'Completed essay' to 'Obvious use of Orientating chart'. This analysis helped me to compare the students' progress in a consistent manner and show how the SWP had contributed to their developing essay writing skills.

3.2.3 Student Essays

My aim was to research how Gal'perin's Theory of Systematic formation of actions and concepts and his Stepwise Procedure, including the SCOBA and orientating chart, might enable students to develop their essay writing skills. Therefore, the essay was one of the primary pieces of evidence and data for this piece of action research. Throughout the data collection period I collected three essays to monitor and compare the students' progress and development.

Essays written during the Data Collection Period		
Data Collection Period		**Essay Title**
Baseline essay	*Baseline Essay assessment* *Collected and analysed*	*"Children of school age should not be working at all. They should be focused on their schoolwork and helpful to their parents. Working for money comes later." Discuss.*
Stepwise Procedure One essay	*Essay assessment* *Collected and analysed*	Students who want to do practical jobs in the future should be allowed to start apprenticeships at the age of 14. Discuss.
Stepwise Procedure Two essay	*Essay assessment* *Collected and analysed*	Should we keep animals in zoos? Discuss.

Figure 13: Titles of the essays written or partially written during the data collection period

Each essay was collected at the end of the action research cycle, corresponding to the end of each Stepwise Procedure. (Refer to Figure 13 above).

3.2.3.1 Baseline Essay

In order to document what was happening to the students' essay writing capabilities during my research, I collected baseline data, so that as the research developed, I could measure progress using comparison, 'interpret the data to make tentative explanation of what had happened' (McNiff, 2010, p.100). I collected a baseline essay from each student, which they had written in classroom test conditions. By this, I mean at the start of the lesson I explained the topic and essay title and asked them to write an essay in silence, with minimal support: a literacy card that had discourse markers and punctuation tips; a dictionary; a thesaurus. I had done very little specific work on essay writing with the Year 9 class prior to the baseline essay text, other than incidental work as we were studying another literature topic.

3.2.3.2 Stepwise Procedure One Essay

This essay was written with an orientating chart or 'cheat sheet' (Haenen, 1996, p.135). In order to encourage a more equal relationship between myself the researcher and the student

participants, (Rappaport and Stewart, 1997 cited by: Hanna, 2012, p.239) I offered them a choice of five essay titles with a vote to choose one. The majority voted for the essay title: 'Students who want to do practical jobs in the future should be allowed to start apprenticeships at the age of 14. Discuss'. The students were then allowed to spend the rest of the lesson planning using a help sheet which included some facts and statistics about apprenticeships. The following day, during their normal 50 minute lesson, the students wrote their essays in silence. Each student had the orientating chart of their choice on the table, their essay plan and the help sheet. I did create a different seating plan from usual, in order for the essay task to seem more serious and to promote individual working without input from their friend or usual work-partner(Pollard, 2002).

3.2.3.3 Stepwise Procedure Two

This essay was conducted in a similar way to the previous ones. The students were allowed some preparation time in the previous lesson. The following day, the students sat in their normal classroom and wrote the essay in the 50 minute time allocated lesson slot. On the tables they had: their orientating chart, their essay plan and any extra facts and statistics they had gathered. The essay title was: Should we keep animals in zoos? Discuss. The only difference was that I did allow the students an extra ten minutes in the following lesson to check their essay for mistakes.

3.2.4 Student Audio Recordings

My second research question was to investigate how SWP might contribute to the development of the students' educated discourse. To ensure I could measure some progress in this area, I recorded sound-bites of two minutes before and after each cycle of the SWP and the group discussions, of 20 – 30 minutes, during the Overt Speech Stage. This resulted in collecting five audio recordings of students' talk. All these audio recordings were recorded on a Samsung tablet with a voice recorder app belonging to WS School. The recordings were then saved onto an external hard drive that was password protected. These data recordings were backed up and protected against any unintentional corruption or damage as well as for the purpose of ethical containment and protection. (Refer to the Methodology Chapter section 3.5 on Ethics). This media data was then catalogued and indexed to aid easy referencing and location of detail. Furthermore, due to the nature of the type of recording, I also tidied up the transcript in order for it to make sense in written form and enable an intelligible understanding for a reader not present at the recording (Denscombe, 2010, p.276). The audio recordings I took are shown in figure 14.

Audio Recordings collected during the data collection period		
Baseline collection period	Two-minute sound-bite recording, in twos or threes, the day before writing the baseline essay.	What is an essay?
Stepwise Procedure One	Overt Speech – group recording of essay writing and the construction of the essay	School makes students too stressed and they should not be given homework. Discuss.
	Two-minute sound-bite recording, in twos or threes, the day after they had written their SWP 1 essay.	What is an essay?
Stepwise Procedure Two	Overt Speech – group recording of essay construction	Create an orientating chart together that would include all elements needed to write an essay
	Two- minute sound-bite recording, in twos or threes, the day after writing SWP 2 essay	What is an essay?

Figure 14: Overview of all the audio-recordings taken of students during my data collection period

3.2.4.1 Sound-bites

The reason I chose to use sound-bites as part of my data collection rather than interviews was because it meant the students had to summarise their knowledge and encapsulate their key understanding of essay writing within two minutes. In addition, it supported step four of Gal'perin's Stepwise Procedure, where he expounds the need for Overt Speech. (Refer to figure 14 above for all the audio recordings). I chose to record these two-minute sound-bites in small student groups of two or three. I sent them into a small annex room without my presence, as I wanted to try to create free and spontaneous responses rather than conducting face-to-face interviews. Since I was the practitioner researcher in my action research, I wanted to allow spaces where students were not so influenced by my physical presence but could perhaps have more free speech. I was aware that the sound recordings could be more influenced by my position as

teacher and that I needed to 'interrogate my positionality' (Soedirgo and Glas, 2020, p.547) so that the students felt more able to record their ideas in a more spontaneous manner without feeling they were trying to achieve anything particular. In the Findings chapter, I explain how the students responded to the recordings, and the inevitability of the teacher influence.

Allowing the students to talk into a microphone, in a small group without a teacher present, created a 'focus group' mentality which resulted in 'spontaneous responses … [of]… greater detail on [their] various attitudes, opinions and experiences'(Berg, 2012, p.173). During a lesson based on essay writing, they left the classroom in pairs or threes and proceeded to an interview room. I sent them with a timer to ensure they utilised the two minutes to record their understanding of the essay writing process onto a digital recording device. The recordings also allowed me to assess their developing educated discourse and ascertain how their meta-cognitive understanding of essay writing was changing.

After the recordings, I transcribed their words and finally analysed the results by identifying and coding key words and phrases relating to essay writing and my research questions. I did not intend to focus on interpretative phenomenological analysis, since I was not investigating the students' own experience of essay writing. My intention was to code words used by the students in comparison to the ECAT and identify how their educated discourse was changing as the research progressed. My aim was to demonstrate that the students were or were not developing a greater understanding of words and concepts associated with essay writing due to the use of SWP. I hoped this would show how their meta-cognitive understanding of essay writing progressed.

The first recording of sound-bites formed a baseline assessment against which I could compare the future sound-bites and analyse the students' development and progress. I used the same groups for each sound bite recording to ensure some consistency. During the baseline soundbite recording, I allowed students to take their exercise books with them into the recording room. On listening to their recordings, however, I found that the students merely read the words they had written in their books. The recorded sound bites are based on turn taking and not discussion or 'group talk' as I had initially expected. The students, due to it being the first time I had recorded their thoughts, were obviously more 'inhibited by the process of recording'(Denscombe, 2010). As my research was action research, I was able to review, evaluate and change this for the SWP1, when I did not allow them to take their books into the recording room. These sound bites enabled me to track the students' developing understanding of essay writing.

3.2.4.2 Group Discussion during Overt speech stage

Gal'perin emphasises the importance of the Overt Speech Stage in his Stepwise Procedure that it needed to be free of objects as 'Learning how to execute an action in speech is learning a relation to this action from the standpoint of other people' (Haenen, 1996, p.140). At first, I found this stage difficult to implement; I had a class of 24 students and felt that a full class discussion would not necessarily engage all the students or give them an opportunity to voice their understandings or misunderstandings. Clearly, it would be more beneficial for the students to communicate their understanding of how to 'execute an action' to each other in a peer group setting, rather than to me. Thus, during the stages of Overt Speech, I gave the students a recording device, as specified above, and asked them to record their discussion without my presence. I asked them to record for twenty minutes. I deliberately excluded myself from these group discussions, to ensure a more focus group intent, but I was aware that my presence could also be more inhibiting due to the researchers own inhibitions of being recorded, within the context of the discussion, affecting the student discussion (Gelso, 1973). Not only was I concerned about their inhibitions of talking to each other with a recording device present, but I was also concerned that they might find it daunting just talking about how to write an essay. Therefore, for SWP1, I gave them an essay title: School makes students too stressed, and they should not be given homework. I chose four groups according to the orientating chart they had chosen (refer to section 3.3.2) and asked them to record their essays using one their chosen orientating chart.

For the discussion group recording for SWP2, I put students into collaborative groups of differing abilities, ensuring one more able peer in each group. They had a shared group aim to produce a combined outcome of a completed the orientating chart template (refer to section 3.3.2) and discuss what they were doing in the process (Pollard, 2002). By being explicit in what they needed to achieve within the twenty minutes, I hoped that they would understand what was relevant to the discussion and have a 'joint conception of what is trying to be achieved'(Mercer, N., 1995, p.96). I transcribed and analysed their discussion, in the same manner that I did for the sound-bites. I colour-coded and cross referenced the key words with the ECAT and their own essays and previous language within the sound bites or the discussions. The progress in the students educated discourse for essay writing, is made clear in the case-study section of the findings chapter.

During the data collection period I initiated several class discussions. These varied from motivation at the beginning of the year, to examples of a good argument and debating over which topic should be chosen for the essay. During discussions I tried to make it relevant to the students. I asked open questions such as: When and where is it important to get your Point of View across

to others? In what circumstances, later in life, might you need to present your point of view? The discussions were primarily for exploration and development of ideas not 'transmission or recitation of information.' (Nystrand, 1997, p.97).

There was one extra group talk that I created, which bridged the Materialized and the Overt Speech stages (refer to section 3.3.3). I divided the class into two teams, by walking around the room giving each a letter: A or B. I asked the students to prepare to debate entitled: 'The internet does more harm than good'. One half of the class had to debate for the argument and the other half against the argument. Within each team they self- selected groups and I gave each group ten minutes to think up as many ideas or reasons for their side of the argument as possible. After teaching the class for 10 minutes on the fundamentals of paragraph structure I asked them to work in pairs. After discussing in groups, they wrote a paragraph together and each group had an opportunity to deliver their paragraph orally to the group. This was a blended stage of overt speech and materialised manipulation; the students wrote essays and it also provided opportunity to talk in groups about how they were developing their arguments.

3.2.5 Questionnaires

I had not, prior to the data collection period, intended to use questionnaires. My preferred methods were audio-recorded soundbites, unstructured discussion, and the students' essays. I didn't want to 'influence [my] respondents or alert them to ideas they had no thought about before'(McNiff, 2010, p.121).

However, I realized I needed more understanding of the meta-cognitive processing, the confidence and the attitude (Elliott, 1991) of the students as they were writing the essays, and quickly came to the conclusion that a questionnaire would be one way to collect this data. The questionnaire would also be invaluable in evaluating the effect of the task (Markova, 1990) and perhaps triangulating evidence later in my analysis (Denscombe, 2010).

As an action researcher, I created the first questionnaire while students were writing their baseline essay. I created it on my computer, printed out and asked them to complete it as soon as they had finished writing their essays. This was a spontaneous response, on my part. I had not planned, developed or prewritten a questionnaire but recognized it might give insight into their confidence levels and the resources they drew upon to help them write. (Refer to The Appendices, section 8.1.1). I asked five questions. The first two with a five-point, tick box, Likert-style

questions. The second two were open questions to allow free observation, one tick for the resource you used, and then a free comments box. Despite following none of the advice: I did not pilot it, or try it out on friends or show it to my tutor, until after the event, (McNiff, 2010, p.123), and thus was not as perfect as it could have been; it gave me some insight into the students essay writing process. The questionnaire I developed on that day formed the basis of my subsequent questionnaire. I developed it and used it as part of their evaluation after each essay that they wrote.

In my further developed questionnaires, I asked the students for more feedback of any skill or element that they felt had been missing in the materialized, teaching, stage and to identify areas that they felt they needed to improve upon. This particularly enabled me as an action researcher to reflect upon other areas to include into the next cycle. And at the end of each essay, SWP 1 and SWP2, I asked them to complete an evaluation questionnaire; I rewrote the evaluation questionnaire that I had given them after their baseline essay, adding a number of other questions about how they thought the orientating chart had helped them and how much they had referred to it during the essay writing process. (Refer to The Appendices section 8.1.3) I wanted to know whether they consider the orientating chart to be a 'cheat sheet' as Gal'perin had intended, or whether they found it a hindrance.

At the end of my data collection period, I created a final evaluation questionnaire (refer to The Appendices section 8.1.4) Gal'perin stated that all steps in his Stepwise Procedure were necessary if the students were to complete a task with precision and with correct sequence. He even called it a 'blueprint' that should be 'deliberately practised' by experienced teachers (Haenen, 2001, p.161) (Gal'perin, P., 1989 (1974), p.82). However, I was aware that some parts of the Stepwise Procedure that been more successful than others and I wanted to ascertain the students' thoughts about the different aspects of SWP. Therefore, in the final evaluation questionnaire, I asked the students ten tick box questions about the different elements in the Stepwise Procedure and then some more open questions about their opinions on what had proved successful or not.

The analysis of the questionnaires took various forms. Firstly, I collated all the information onto an Excel spreadsheet. I used the Likert scale in numerical form to produce bar charts of preference for different aspects of SWP. The open questions were coded by key words which responded to the ECAT and the various themes which started to emerge were cross referenced to those words in the sound-bites and themes from the group discussions and the students' essays, in what Denscombe calls a 'continual process of refinement'(Denscombe, 2010, p.271).

In this section I have detailed my main data collection methods: research journal; staff collaboration; essays; student sound recordings and questionnaires. In the next section I explain how I used these methods while developing and using Gal'perin's Stepwise Procedure within the classroom.

3.3 GALPERIN'S STEPWISE PROCEDURE AND MY METHOD OF USING IT IN THE CLASSROOM

In this section I will explain how I used Gal'perin's Stepwise Procedure in the classroom and how my data collection methods fitted within it. Firstly, I give an overview of the six stages and the types of data collection method I employed. I then explain how this worked in practice in the classroom, giving detail of what I did and the reasons for my doing so.

Galperin's Stepwise Procedure	Data Collection Methods	Overview of teacher led actions and tasks
Motivational Stage	Research Journal Student physical response to stimulus Questionnaires Student aims for improvement	Challenge and student self-assessment on effort. Teacher reinforcing objectives. Self-evaluation of written essay achievement Use of Orientating stage
Orientating Stage	Research Journal Student notes on Expert Essays Orientating charts Recording of staff discussion Questionnaires	Reading then deconstructing an expert essay Overview of the skills to be developed Development of an orientating chart
Materialized Stage	Research Journal Student notes Questionnaires	Practice of individual elements of essay writing
Stage of Overt Speech	Research Journal Student Sound-bites Student Group discussions recorded Group orientating chart Questionnaires	Group Discussions
Stage of Covert Speech	Research Journal Student Essays Questionnaires	Silent work
Mental Stage	Research Journal Student Essays My assessment using essay assessments criteria chart Colleague assessment of student essays Questionnaires	Essay writing in silence

Critical Reflection	Student reflection on essays and aims for improvement Researcher review and reflection on the GSWP 1 Evaluation questionnaires Student interview	Class discussions Student reflection on improvement Students Setting targets Analysis of essays and progression Analysis of questionnaires Reflection with my supervisor Reflection with staff colleagues

Figure 15: A copy of figure 9 with added overview of the actions I took to fulfil GSWP in the classroom.

Both my research questions focused on Gal'perin's SWP and how that might contribute to the development of student's essay writing skills and the educated discourse that surrounds that academic development. It was therefore essential that I stuck to the SWP as closely as possible and categorised certain actions in the different stages. (Refer to figure 15 above). In both SWP1 and SWP 2 I tried to ensure the actions, tasks and classwork was similar. In this section I will explain the steps I took to follow the SWP and how it looked in a secondary English classroom.

3.3.1 Motivational Stage

At the time Gal'perin was researching his Stepwise Procedure in the Soviet Union, motivation was not considered an issue. Socio-cultural theory separated learning into two parts. Firstly, the actions which led to learning, or technology of instruction, which Gal'perin was interested in, and secondly, the motives, attitude, or personality types behind the desire for learning, which they believed were inherently developed from the social expectations of the community. At the same time, however, Gal'perin also named the first stage of his Stepwise procedure the 'Motivational Stage', despite Gal'perin's lack of guidance on this topic, I will now explain what I did to try to collect some data on the Motivational Stage.

In order to gather baseline data on motivation I challenged the students to be honest about the effort they had put into their last piece of work. I used a physical response strategy to help with a visualisation of their effort. I constructed an imaginary percentage line and used pieces of paper to enforce the line to the students. At the front of the classroom near my desk I place a piece of paper with the statistic "100%", then at the back of the classroom I placed a piece of paper with the statistic "0%". I then asked the students to consider the amount of effort they had put into their last piece of work and stand at that point in the line between 0% and 100%. I was deliberately connecting effort and motivation at this point using Dweck's ideas, who points out that it is important to praise the effort the students make to achieve, rather than their ability to achieve (Dweck, 1986). After I had taken notes on where they had positioned themselves on this

imaginary line, I then asked the students to consider what effort they would need to make to achieve more or achieve a higher grade and to move themselves on the imaginary line to a different spot on it. I again, took notes on their position on that line.

At the start of SWP1 and SWP2 I allocated 15 minutes to a full class discussion with a focus on motivation; in this I was incorporating the idea of self-regulated learning. (Schunk and Zimmerman, 2008; Denscombe, 2010; Wentzel, 2014) I led discussions on the need to improve grades and develop skills of essay writing and argument for their future work and study. Both these discussions were fairly general, although I encouraged students to talk in pairs about their responses, and I took some notes on their whole class responses.

In Markova's article: 'A strategy for forming learning motivation' found that students were more motivated when the teacher saw motivation as a 'special task' during the lessons and 'continually reinforced' objectives to them. (Markova, 1990, p.281) During all the lessons I ensured that the objective of the lesson and the outcome of the overall task was written on the board, on the Power point slides I used, (refer to The Appendices section 8.5), and that I reminded the students of the objectives during the small tasks they were engaged with during the lessons.

As discussed in my literature review, student motivation is partly hinged on the 'tutor's role as an activator,' (Wood, Bruner and Ross, 1976, p.89) and the way that the teacher supports the student, as a mediator, to make use of the tools of learning (Markova, 1990; Haenen, 1996; Daniels, Cole and Wertsch, 2007). In order to emulate this, I ensured I explained tasks, not only from the front of the class, but also to each small group, checking their understanding of the task and the tools they had been given for that task and answering any questions they might have.

Gal'perin believed that all students have 'an active nature of the mind' (Gal'perin, P., 1989 (1974), p.73)and that full orientating basis, Orientating Stage, gave students more motivation to complete the task. Markova supported this idea but added that those students who 'became involved in the process of assessing their own education' increased their motivation. (Markova, 1990, p.281) I used two methods of student self-assessment to promote motivation. Firstly, after I had marked their baseline essays, I asked the students to reread their essay and my assessment and to respond to my marks by detailing some bullet points which would help them to improve upon their work next time. Since my marking scheme was linked to a numerical basis, the students were able to evaluate a mark out of 54 and which criteria in the ECAT they had failed to reach. Secondly, after SWP1 essay, I projected the skills graph for the whole class, being careful that no one's name was shown or mentioned. (This skills graph can be seen in the Findings section 4.2.1).

I deliberately did not show a leader board as I wanted to focus on motivation and achievement of skills rather than their place in the class.

20/01/2017	maintaining PoV - key words	conclusion - sophisticated argument	paragraphs - destroy counter argument , bias
Mia	1	1	1
Lottie	1	1	2
Vanessa	1	1	1
Claire	1	1	1
Rosie	1	2	1
Jessie	1	1	1
Jemma	1	1	1
Gilph	1	1	1
Ferry	1	2	2
Mildred	1	1	1
Robert	1	1	1
Richard	1	1	1
Zoe	1	1	1
Kim	1	1	2
Bean	1	1	2
Jay	1	3	2
Alexa	1	1	2
Finn	1	2	1
Naruto	1	1	3
Robin	3	1	3
Monika	1	1	3
Juan	1	3	2
Lisa	1	3	2
Totals (69)	25	32	37

Figure 16: part of an excel spreadsheet showing how I used the data from the ECAT to create a skills graph, which I hoped would create more motivation in the students

If a student had achieved a certain skill, I awarded three points; if there was no evidence of the skill I awarded one point; if I could see that they had tried I awarded 2 points. Only the student themselves saw their ECAT and the marks I had awarded them. The Excel Spreadsheet in figure 16 above, shows how I used the skills grid to reveal which skills the whole class needed to improve upon. There were 23 students in the class and the top mark they could receive for each skill was three marks. That meant each skill could get 69 marks if all 23 students were awarded a full three marks. I then used Excel tools to make this grid into a chart, which then revealed the

weakest areas for the whole class and the strongest areas. This also supported the students in writing their own improvement plan.

3.3.2 Orientating stage

Gal'perin's idea of the Orientating Stage was that the student would be provided with all the 'necessary preliminary knowledge' in a 'schemata for a complete orientating basis of the action' so that the student would understand everything about the task before he started and thus be guided by the schemata to complete the task 'correctly'. (Gal'perin, P., 1989 (1974), p.71). Gal'perin separated the Orientating Stage into six parts called a Scheme of Complete Orientating Basis of Actions (SCOBA).

Gal'perin's Orientating Stage or SCOBA	My practical interpretation of SCOBA
1. The intended output of an action	Expert essay: identifying the patterns and the outcome Hearing the educated discourse of the essay writing process
2. The pattern of model of the action as executed by an expert	
3. The means of the action	Deconstructing the expert essay patterns and practicing how to construct them as individual elements Using the educated discourse to discuss the essay writing process
4. The objects of the action	
5. The general plan of action giving the cause of action and the sequence of its operations in a summarized form	
6. The orientating chart or cheat sheet representing the former five points in summary	Developing an orientating chart which incorporates all the elements and (educated discourse in written form) needed to achieve an expert essay

Figure 17: An overview of Gal'perin's Orientating stage and how I interpreted that in my research

In this Orientating Stage the students were introduced to an essay; they needed to understand the elements of the essay, the educated discourse that surrounded the essay writing process, the process or sequence of the essay and be able to see the form of the essay that they would create

– the outcome. The outcome needed to be shown in 'the form of the action in which it is demonstrated by a 'craftsman' and which must be learned by the students, this also has clearly delineated and prescribed indices' (Gal'perin, P., 1989 (1974), p.69). Therefore, in order to provide an essay demonstrated or written by a 'craftsman' I decided to use essays written by expert essay writers. Once I had made the decision to use, what I then termed: expert essays, as examples of outcome, I was then able to create the plan above, refer to Figure 17, whereby I designated each step of Gal'perin's orientating stage or SCOBA with a corresponding action that the students and /or I would perform within the classroom.

Expert Essays used during the Data Collection Period. (The full text for each excerpt essay can be found in The Appendices section 8.2)		
Data Collection period	**Essay title**	**Original author and reference**
Stepwise Procedure One	Do children need both biological parents to be successful and emotionally stable?	Chris Polito. March 2008
Stepwise Procedure Two	Donald Trump: Not mad, but merely the arrogant Boss we've all seen before.	Phil McDuff. The Guardian. 16 February 2017
	Homework is a threat to students' freedom. Partial essay.	Miranda Roberts 2017.
	Conclusions Only: Donald Trump: Not mad (as above) I have a dream. 2008 Victory Speech	 Phil McDuff. 2017 Martin Luther King Jnr. 1963 Barack Obama. 2008
	Why the world needs zoos.	Dr David Hone. The Guardian. 08 March 2017
	Zoos shouldn't be jails: Let's reimagine them and enjoy animals in the wild.	Jules Howard. The Guardian. 29 February 2017

Figure 18: Overview of the expert essays used for the data collection period which were abridged by me.

The expert essays needed to include all the Criteria on the ECAT if the students were going to understand the outcome, and 'form a picture of the circumstances' that would enable them to 'map out a plan of action' (Gal'perin, P., 1989 (1969), p.28). The expert essays also needed to be relevant and interesting to them as young people and be accessible to the stage of general language development of year 9 students. They also needed to be short enough to be analysed in a lesson and be of a word count that a student could achieve within a 50 minute period of writing.

(Refer to figure 18 above for an overview of the expert essays. The expert essays can also be read in The Appendices section 8.2) As a teacher, with school objectives and expectations, I also had to consider the students' future GCSE essay development and therefore use essay topics which were similar to those chosen for GCSE exam texts. These rather strict criteria meant I had to abridge and amend every expert essay I chose. I wrote one of the essays myself, as you will see in the chart above. I did this because I wanted to focus on a particular topic and could not find anything suitable online. Figure 18 above, refers to the expert essays I selected and the phase of the data collection within which they were used.

The orientating stage in both SWP1 and SWP2 commenced with a class discussion about essay writing. The students gathered and identified their previous knowledge of words, phrases and criteria connected with essay writing. The expert essay was read out together in class and students worked in pairs using dictionaries to ensure they were confident with the definitions of the words. I then conducted a whole class discussion to ensure the students understood the main argument of the expert essay.

The initial student participation was deconstruction of the essay. I do not use the word 'deconstruction' as Derrida who sought to 'demonstrate the instability of language and the shaky foundations on which most of our theories rest' (Sim, 1999, p.71), I use the word to mean breaking the essay into its constituent parts, identifying elements within the essay such as: the structure, the devices, the vocabulary and the sequence. This deconstruction was conducted alongside the ECAT and the students' class list of previous understanding of essay writing. To do this task, students were put into groups of two or three. They were given a copy of the ECAT and given highlighters and sticky notes to mark against the essay what they saw within it. At the end of the small group work, I brought the class together to discuss what they had identified and confirm the structure, vocabulary, devices and sequence of the expert essays.

At the start of Stepwise Procedure Two, I asked the students to deconstruct an expert essay, in silence using a blank orientating chart; I had created this orientating chart template as a way of ensuring students were including the correct elements in essays. Refer to the section 3.3.2. By asking the students to do this in silence rather than in groups or pairs, I hoped to artificially create the covert speech section, as they had to think for themselves. In addition, I hoped that this would help me to understand how much they understood about writing an essay and would also provide them with a chance to identify those parts of an essay about which we had learnt.

3.3.2.1 Orientating charts

For Gal'perin the 'orientating chart' was the key. 'The starting position with which the formation of a new action begins … consists in the following: the schema for a complete orientating basis for the new action is explained to the subject and presented to him written on a card' (Gal'perin, P., 1992 (1978), p.62). Gal'perin described it as a 'terrible thing to look at' because it contained everything the student would need to do to complete the action as a craftsman or expert. Haenen interprets this 'card' as a 'a clear picture' or a kind of 'cheat sheet'(Haenen, 1996, p.135).

The orientating chart, according to Gal'perin, should be mediated by the teacher with the students working together using the skills and elements they have identified from the expert essays. But mediation with 24 students in a class, is not a simple nor straightforward task. I thus firstly assigned the students into small task groups. I asked them to discuss how an orienting chart or card could be created, and what elements they might want to complete the task. The students asked for various implements and elements to be provided: A2 and A3 paper; glue, scissors, string, coloured felt-tip pens and coloured paper; typed lists of the elements identified in class when discussing essays and a list of discourse markers. In the next lesson I put all the students into pairs to create shared orientating charts. (Although some of the Orientating charts are referred to in my thesis, you can view all the orientating charts in The Appendices section 8.4). Small group and paired work were used as a 'means by which [students] can support, challenge and extend their learning together' (Pollard, 2002, p.229). I acted as a 'observer-participant' (Cohen, 2018, p.543).I did not work within the group, as a teacher-mediator would do in Gal'perin's research classes, but I ensured I interacted peripherally with each class overseeing the development of the task by refocusing certain groups onto the task at hand, answering questions and ensuring the task was completed.

Working in small groups without the teacher mediator was a risk at this point, although it encouraged 'independent discoveries on the part of the pupil under the [minimal] guidance of the teacher' (Gal'perin, P., 1989 (1974), p.80), it created an obvious problem, in that I was not as much a mediator as perhaps Gal'perin intended. Gal'perin believed that a teachers' first imperative was to prevent pupil error. Haenen commented that Gal'perin regarded 'each error as a problem, that of finding some cue or point of references that will enable a subject not to make this mistake' (Haenen, 1996, p.29). On the one hand I wanted to ensure that the students had been full participants in the process of creating the orientating chart and yet on the other hand, Gal'perin insists on having an orientating chart which is full and complete.

Therefore, after the students had completed their first orientating chart, firstly, I allowed the students to look at each other's charts and choose a chart they felt would help them to complete

an essay like an expert. Secondly, I suggested various elements they might want to consider or add to their orientating chart such as: examples of skills; discourse markers; connectives; additional notes. Finally, I gave them 15 minutes, on their own in silence, with the orientating chart they had chosen, to customise the chart or add notes to it to help them in the writing of their own essay like an expert. (All the students' orientating charts can be found in The Appendices section 8.4).

In Stepwise Procedure two and in accordance with action research, I reflected upon the essays they had created with their orientating charts and considered a way of helping the students devise an orientating chart which would preclude errors. Even Gal'perin accepts that sometimes procedures need to be redefined, 'not only pupils but also teachers are subject to illusions that they are familiar with the material and confident with it, it is never superfluous to test if in fact everything is going as well as it seems at first glance' (Gal'perin, P., 1989 (1974), p.79).

Orientating Chart for SCOBA 2 Name: _____			
Paragraph	Elements to include	Suitable vocabulary	Sentence starters
Introduction			
Development paragraph			
Personal experience paragraph			
Development paragraph			
Counter argument paragraph			
Development paragraph			
Development paragraph [maybe]			
Conclusion			

Other elements to remember	

Figure 19: Blank orientating chart template devised by me

I decided to create a blank orientating chart template of all the elements I considered necessary for essay writing. Refer to figure 19 above. I utilised the ideas from the students' original orientating charts to create this template, which I felt, would enable the orienting charts to be complete and correct and contain everything the students needed to know so that they would be prevented from making errors in writing their essays. I wanted to ensure that the students would have a more complete orientating chart in a clearer style to enable them to write a more successful essay and encourage them to perhaps include more of the detail into their orientating charts. This new orientating chart template also included work the students had done in the covert and overt speech stages.

3.3.3 Materialised stage

The materialized stage within Gal'perin's Stepwise procedure, focuses on students' manipulation of physical objects to aid understanding of the mechanics of the task they are going to complete in the future, in this case, writing an essay. Since we were writing essays, rather than making chairs, an instance of something physical, I had to be creative in thinking how students could manipulate 'objects' to understand the mechanics of essay writing. The mechanics of essay writing includes several key skills as listed in the ECAT. Refer to figure 20. After the students had written their baseline essay and then their SWP One essay, I identified the top five skills which students had found difficult to achieve. I did this through analysis of their essay writing using an excel spread sheet as explained in section 3.2.2. I then focused on the student development of these skills in the materialised stage.

Materialize Stage. The elements chosen & the form of physical manipulation		
Stepwise Procedure	**Element of essay writing**	**Form of physical manipulation**
Stepwise Procedure One	Paragraph structure	Using P.E.E. to create one paragraph

	Discourse markers	Categorizing key discourse markers
	Anecdotes and examples	Mind-mapping examples and ideas
	Introductions	Identifying and copying key elements in expert introductions
Stepwise Procedure Two	Counter arguments	Identify counter argument. Create a template and create a similar one
	Succinct language	Modal verb, active verb and modifier definitions search and apply
	Conclusions	Identifying key elements in three expert conclusions and experimenting with these key elements

Figure 20: Chart showing the different physical tasks included in the materialised stages of each Stepwise Procedure.

3.3.3.1 Materialised Stage for Stepwise Procedure One

I chose to base the materialised stage within the context of preparing to debate an argument entitled: 'The internet does more harm than good'. (I created a separate PPT for this and it can be found in The Appendices section 8.5.3). I spilt the class into two teams: for the argument and against the argument. Within each team they self- selected groups. Each group had ten minutes to think up as many ideas or reasons for their side of the argument as possible. After teaching the class for 10 minutes on the fundamentals of paragraph structure I asked them to work in pairs. For the fundamentals of paragraph structure, I focused on P.E.E, an acronym meaning Point, Evidence, Explanation. I told the pairs to pick one of their ideas or reasons and then to consider:

1. Point: What is the point you are trying to get across – state it clearly

2. Evidence: What evidence or reasons do you have to back up that point (It might be personal experience of social media)

3. Explain: Clearly explain how your evidence emphasizes your point; explain why the point is relevant, explain why the evidence makes a difference to our understanding of the overall argument.

The physical manipulation was writing a paragraph with a peer, from a structure I had given them. I found the paired working a good confidence builder for weaker students, where they could gain support and 'extend learning together' (Pollard, 2002, p.229).

For the physical manipulation of using discourse makers, I used a mix and match task.

Therefore	Similarly	Moreover

Thus	Equally	Furthermore
Consequently	In the same way	In addition
Certainly	Just as	For instance
Likewise	As with	For example
Above all	Significantly	Indeed
Clearly	Essentially	However
Although	Alternatively	On the other hand
Unlike	Despite	Nevertheless
Firstly	Secondly	Primarily
Subsequently	Finally	Since

Figure 21: lists of discourse markers that the students were given to categorise

Again, I chose to set them the work as pairs of students. I gave them a list of discourse markers, (refer to figure 21 above), and five categories within which to select and place the words. The categories I chose were: emphasis; cause and effort; compare; contrast; add information. I chose these categories as types of paragraph they might add into their essays at their stage of development. The students then ended up with a clear list of discourse markers in categories which they stuck into their books and I asked them to refer to at various stages of the data collection period.

When focusing on anecdotes and examples, I led a class discussion of the types of anecdotes or examples that could be used to support points. As already mentioned, we started with personal experience. We then recapped on other ways of giving evidence such as: facts and statistics; using an expert's opinion; telling someone else's story. As part of their homework task, students were advised to look up some of these types of examples.

For the physical manipulation of the introduction, I took the students back to the expert essay by Polito (refer to The Appendices section 8.2.1) and asked each pair of students to look closely at one of the sentences in that introduction and explain to the class exactly how it had been put together, what elements it contained and its purpose in the introduction. I then led the class in summarizing their findings and creating a list of elements to include in an introduction.

3.3.3.2 Materialised Stage for Stepwise Procedure Two

To identify and physically manipulate counter arguments, I used the expert essay written by Mcduff, (refer to The Appendices Section 8.2.2*)*. After agreeing on the simplified elements of a counter argument – Identify counter argument and then attack this counter argument implying it is insubstantial – the students reread paragraph three and in pairs attempted to identify the elements of counter argument within the paragraph and create from it a template with which they could use to create their own counter argument.

<table>
<tr><th colspan="4">Active verbs, modal verbs, modifiers</th></tr>
<tr><td colspan="2">Modal verbs

▪ Type of auxiliary or “helping” verb.
▪ They combine with main verbs to express meanings such as ability, possibility, permission, obligation, and necessity.
▪ Modal verbs can be used to express <u>subtlety</u> when questioning and exploring ideas</td><td colspan="2">Modifiers

▪ Modifiers aid the expression of certainty, possibility, perception and interpretation.
▪ modal verbs and modifiers are used to discuss and write about different interpretations / ideas</td></tr>
<tr><td colspan="2">• The principal modal verbs: can, could, may, might, must, should, and would.

• Their negated forms: cannot, couldn’t, mustn’t, shouldn’t</td><td>Almost
Certainly
Clearly
Consequently
In a sense
Necessarily
Often
Perhaps
Possibly
Definitely</td><td>Probably
Effectively
Essentially
Evidently
Immediately
In effect
In fact
Somewhat
Ultimately
Undoubtedly
Unquestionably</td></tr>
<tr><td colspan="4">Active Verbs</td></tr>
<tr><td>seems</td><td>evokes</td><td>exhibits</td><td>Implies</td></tr>
</table>

argues	denotes	explains	Reinforces
clarifies	demonstrates	exaggerates	Signifies
connects	displays	indicates	Supports
criticizes	highlights	portrays	underlines

Figure 22: Active verbs, modal verbs and modifiers. A sheet used to develop succinct and sophisticated language use in the students.

In order to develop the skill of succinct language, I chose to focus on active verbs, modal verbs and modifiers. I gave out a reference-sheet (refer to figure 22 above) which included several useful words for writing argument essays. Students were given dictionaries to look up and learn new words and the subtle variations in definitions, they were encouraged to use and experiment with the words, writing paragraphs in their exercise books on the topic: 'Homework is a threat to students' freedom. Discuss'

Sophisticated Conclusions
'And when this happens and when we allow freedom ring, when we let it ring from every village and every hamlet, from every state and every city, we will be able to speed up that day when all of God's children, black men and white men, Jews and Gentiles, protestants and Catholics, will be able to join hands and sing in the words of the old negro spiritual, Free at last, free at last, Thank God Almighty we are free at last.' Martin Luther King 1963
'This is our chance to answer that call. This is our moment. This is our time - to put our people back to work and open doors of opportunity for our kids; to restore prosperity and promote the cause of peace; to reclaim the American dream and reaffirm that fundamental truth - that out of many, we are one; that while we breathe, we hope, and where we are met with cynicism

and doubt, and those who tell us that we can't, we will respond with that timeless creed that sums up the spirit of a people: yes, we can.' Barack Obama 2008
Therefore, Trump's ascension is not the result of a "depraved madman" accidentally ending up in power, but of basic, widespread and wholly predictable cognitive biases. Our rush to brand him as an insane dictator is also a bias – we wish to believe that we couldn't have seen this coming. We do not want to believe that our actions contribute to the sadistic policies of the Trump administration. This, in itself, is an act of self-protection. Trump the madman is a soluble problem: we just replace him. But Trump the perfectly sane result of a deeply broken system, is far more terrifying; this is the real reason why we are putting so much effort into inventing reasons it cannot be true. Phil McDuff 2017

Figure 23: This shows the conclusions I used to support students write succinct and sophisticated conclusions.

To enable students to physically manipulate conclusions, I chose three conclusions, and the students compared the structure, the elements, the vocabulary, and the devices. (Refer to figure 23 above). I chose to use the conclusion written by McDuff in the expert essay the students had deconstructed, since they had already read it a few times and were familiar with the argument. I chose Martin Luther King's famous 'I have a Dream' conclusion because the students had read this in Year 7 and recently covered the civil rights campaign in their history classes. And finally, I chose Barack Obama's 2008 Victory Speech because the students were particularly interested in USA politics since Donald Trump had only just been sworn in as President in January 2017. The students worked in small groups of four to compare these conclusions and identify what makes a sophisticated conclusion in each case. After the class had agreed on several similarities, I gave the class an expert essay, 'Zoos shouldn't be jails: Let's reimagine them and enjoy animals in the wild' by Howard 2017. (Refer to The Appendices section 8.2.4). However, I gave it to the students without its conclusion and asked them, in pairs, to create a conclusion in a similar vein to what they had identified in the other conclusions and in keeping with the expert essay.

3.3.4 Overt Speech Stage

This stage was important for this research because it links with my research question about how Gal'perin's SWP might contribute to the development of educated discourse. Gal'perin emphasised the importance of this stage: 'it is necessary to convert the action into the form of verbal speech, to teach pupils to perform it without any direct reliance on objects, by verbal presentation alone…[so that] the object content becomes a thought or thinkable object.'

(Gal'perin, P., 1989 (1957), p.52) However, I wanted to observe how this Overt Speech stage might enable the development of educated discourse of which Mercer and Hewitt write. (Mercer, N., 1995; Hewitt, 2012). I therefore had to make a few compromises. Gal'perin's mode within this stage was to ensure that each student could verbally rehearse the action in words alone in so much detail that 'each attribute be systematically named and that it be explicitly stated' (Gal'perin, P., 1989 (1957), p.61). But in order for me to analyse the development of the students educated discourse, I chose to record the students' discussion so that I could analyse their development. (Refer to section 3.2.4 on audio recordings).

For both Overt Speech stages SWP 1 and SWP2 I selected mixed ability groups, ensuring that each group had, what I considered to be a more able and conscientious peer, who I felt might be able to steer the group and keep the group on task. I put the class into groups of 4 or 5 and gave them the essay title: School makes students too stressed and they should not be given homework. I firstly, asked the students to discuss this title and make notes. The following lesson I arranged for them to go to separate rooms to discuss how they would write this essay using their chosen orientating chart. I told them: 'talking together about what and how you are writing, the theory is that you will remember it better when you have to do it on your own'. Each group took a recording device with them, and I gave them 20 minutes to talk, discuss and write.

For SWP 2, I made the task more conceptual and closer to what Gal'perin envisaged. Rather than giving them an essay to write I gave them a blank orientating chart template and discuss what elements should go where and what kind of language they might employ while writing. They needed to talk about each step they would take in writing the essay and be explicit about what element went where.

3.3.5 Covert Speech stage

In Gal'perin's SWP the Covert Speech stage occurs after the Overt Speech stage but is a foregone conclusion of the Overt Speech stage. Gal'perin expected the students to begin talking to themselves 'external speech to oneself' (Gal'perin, P., 1989 (1957), p.61) As an experienced secondary school teacher, I did not consider this would be accepted, or universally carried out, and even if some students did it, they might take the brunt of peer group laughter – to put it mildly. I therefore omitted it from SWP1. For Gal'perin the Covert Speech stage symbolised the transfer into the student conscious and was a precursor of automation. During SWP2, however, I did insert a representation of Covert Speech, but not in the way Gal'perin might have expected. I gave each student the expert essay 'Why the world needs Zoos', (refer to The Appendices section 8.2.5) and

asked them to complete the blank orientating chart template with words, phrases and examples from the essay. Obviously, this was more of a deconstruction exercise than a Covert Speech Exercise, and in hindsight, and with more time at my disposal, I might have asked three or four individual students to individually record how they would write an essay. This already leaves a gap for further research.

3.3.6 Mental Stage

The mental stage is that of automation, where the student can perform the task without impediments. Gal'perin believed that the familiarisation that the student has had with the material throughout the previous stages, allows for the transformation of the concept of the action. 'the sequence of operations in the particular action was reflected in the cerebral cortex as a dynamic stereotype of the action … becoming a generalised, abbreviated, automatically functioning mechanism … and appears in finished form.' (Gal'perin, P., 1989 (1957), p.62)

The mental stage is invisible and the only way of discerning that the learning has taken place is through an analysis of the outcome. And in this piece of research the outcome was the essay. I collected three full written essays from the students during the data collection period: a baseline essay, an essay at the end of SWP 1 and an essay at the end of SWP 2. In this way I was able to compare their essay writing development. (refer to section 3.2.3).

In this section, I have attempted to give a detailed and reasoned description of how I implemented Gal'perin's Stepwise Procedure in the classroom during my data collection process. I have tried to create a constructed and mapped out path for the reader to be followed from my conception to the processes I employed to be able to use Gal'perin's theory in a year 9 classroom(Denscombe, 2010). I next section I explain the critical reflection and evaluation I sought to employ to ensure trustworthy and reliable findings.

3.4 REFLECTION AND EVALUATION

In this section I will explain my reflection and evaluation process and how it was an integral part of my data collection period. I will explain my analysis and refer to sections of the thesis where I give more detail about them, as necessary. I reflected and evaluated on my research in several ways: Student reflection and setting targets; Analysis of essays and progression ; Analysis of

questionnaires; Reflection with staff colleagues; verbal discussion and dialogue with my supervisor.

My aim in each reflection process was to try to create a complete orientating basis of action for the students. Gal'perin made a distinction between a SCOBA [scheme of complete orientating basis of action]and an ISOBA [incomplete scheme of orientating basis of action]. Gal'perin argued that the students should have a SCOBA to enable them to understand and complete tasks without any errors. But he was also aware that the teacher and the student need to understand the material completely if the outcome is to be correctly executed, 'not only pupils, but teachers are subject to illusions that they are familiar with the material and confident with it, it is never superfluous to test if in fact everything is going as well as it seems at first glance.' (Gal'perin, P., 1989 (1974), p.79) In addition, since my chosen research method was the action research then reflection and evaluation were essential to the cyclical process, (Denscombe, 2010). This critical reflection and evaluation process occurred three times within my data collection period: after the baseline essay; after SWP1 and then after SWP2.

The critical reflection started with the analysis of essays and questionnaires about the essay writing process. For the essays, after reading, and evaluating using the ECAT, I then created an excel spreadsheet, (refer to section 3.2.2). This enabled me to make comparisons and cross reference the individual and the class progression. My analysis of the questionnaires was similar, (refer to section 3.2.5). After transferring them to a spreadsheet I spent some time coding words and phrases and comparing students' comments with their own essays. (Refer to the Findings Chapter 4). I analysed the similarity or disparity between the students' comments on their essay achievement and my evaluation of their achievement. I was also able to cross reference this with the students own comments on areas for essay improvement. Crucially, the analysis of the essays and questionnaires, led me to make decisions about what to focus on in the Materialised Stage of Gal'perin's SWP, (refer to section 3.3.3) And secondly, it led me to make decisions about how to change the nature of the orientating chart (refer to section 3.3.2).

Collaboration and informal discussion with staff at the school within which I was working, also provided avenues for critical reflection and supported the bracketing (Berkovic et al., 2020; Soedirgo and Glas, 2020) necessary for the third space (Cormier, 2018) as the practitioner researcher that I was occupying in my research. This third space was further enabled by my invitation to speak to the whole school about my research and share what WS school termed 'reverse modelling'. (Refer to The Appendices section 8.5.5). I explained Gal'perin's hypothesis and the importance of a SCOBA, showing students a clear, accessible, and achievable outcome

while using educated discourse appropriate for their subject. The experience of delivering my research hypothesis and the ongoing data I was collecting, and in that session answering questions about it, gave me the opportunity to become more objective with my research, as well as show the action research transformational influence, (Kemmis, 2009) and aided my critical reflection. In addition, to this staff collaboration, one staff member, and member of the English Department, marked essays from two students. This enabled me to critically compare my own essay analysis with another staff member and supported the validity of my findings.

As a pragmatic action researcher, I am aware that my critical reflection, despite colleague and supervisor discussions, is based on interpretive meaning making (Pring, 2007). My data collection period involved this critical reflection and research, involving dialogic interaction and textual interaction, before I came to a renewed understanding of the practice and advancing into a deeper understanding. Similarly, within Gal'perin's research there is space for the reflection or test of the action and a place to change, renew and reformulate the actions until a SCOBA is created.

It this section I have sought to give an overview of the critical reflection I engaged with at the end of each cycle of the action research process or SWP. In the next sections I detail the important aspects of the research ethics and validity I pursued.

3.5 ETHICS

The ethical issues involved in my action research project were linked to the very responsibilities I had as a teacher within the secondary school. I had a duty of care and safeguarding responsibilities towards all students within WS establishment. However, in this project there were other protocols that I needed to ensure were followed in addition to the responsibility, respect and rigor that my colleagues, my students and their parents might generally expect of me.

3.5.1 Informed consent

In this piece of action research, collaboration with colleagues and students was central to the development and success. Thus, they had 'rights and a stake in the process' of this research (Thomas, 2013, p.45), firstly, all participants, and other stakeholders were informed. Even as I was preparing for my data collection, the Head Teacher immediately gave verbal consent, as she believed that the research, I was undertaking followed on from the project work I had been doing

within the school as part of my paid role and responsibility. In addition, she advocated the idea behind my research question: in that by developing a common language for learning / educated discourse within a school it might enable students to make more progression. My colleagues within WS are also aware of my PhD study because I shared with them some of my research when I led whole school professional development sessions over the previous year 2015-2016. Even though most of my colleagues knew about my research and verbally agreed to participation, I ensured I got written consent from all colleague participants. (Refer to The Appendices section 8.3.3).

Most importantly, however, was the involvement of students classed as minors, under 16 years old. This action research involved the students participating and collaborating with my project and developing it, forming their own orientating chart. I recognised that the students in my year nine class, aged 13 and 14 years old should be given the opportunity to choose whether they wished to participate, being as I am 'engaged in research with children rather than research on children' (Drapeau, 2009, p.224; Neill, 2014). I recognise with BERA that, 'children who are capable of forming their own views should be granted the right to express those views freely in all matters affecting them'([BERA], 2018, p.15) However, following UNCRC, United Nations Conventions on the Rights of the Child, children under 16 'cannot legally give consent themselves' (McNiff, 2010, p.51) it is right and appropriate to take 'into account the rights and duties of those who have legal responsibility for children, such as those who act in guardianship' (BERA, 2018, p.15). Permission was, therefore, sought and given by the parents or guardians who are acknowledged as those responsible for protecting their wards from harm. Therefore for both students and parents, 'the same values of respect, trust, clear information and good communication apply'(Alderson, 2011, p.100).(For examples of these consent forms, refer to The Appendices sections 8.3.1 and 8.3.2)

It is obviously important to 'ensure all participants understand, as well as they can what is involved in the study' (BERA, 2018, p.9) Firstly, I introduced my research and my plan for the year, explaining to the students that they would write several essays during the year, following Gal'perin's Stepwise procedure. I told them that I was assessing whether Gal'perin's Stepwise Procedure would help them to improve their essay work. I emphasised that they would not be doing any more work than normally expected during a Year 9 school year. Both parents and students were given letters (refer to The Appendices section 8.3.2) which included: the nature and purpose of the study; expected benefits of the study; information about confidentiality and data storage; my ethics procedure; my full contact details; options for choosing not to be involved(Thomas, 2013, p.49). I provided opportunities for both student and parent/guardian to

sign and give their consent, respectfully recognising the voice and contributions of these students as important in the research process. When I gave out consent letters, the students asked more questions about the research, such as: 'Why do you want to be a Doctor? What happens if our parents' consent and we don't consent? What will you do with all the data? How long is an essay? In fact, all students and parents consented to be part of the project, except one boy who left the school, after one month, and went to another school due to friendship issues. His data is not included in this research.

3.5.2 Right to withdraw

Each student within the class identified for research purposes, was accorded the right to withdraw from the research without detriment (BERA, 2018). The purpose of this research was to investigate how developing a common language for learning / educated discourse within a school could enable students to make more progression in essay writing and develop their educated discourse, ultimately benefiting all the students within the class. Since it was a piece of action research, I did not plan, at the start, a specific scientific control group, again emphasising that all the students had the potential of benefitting and increasing their meta-cognitive understanding of essay writing. I chose a subject, essay writing, that all students had to develop in order to achieve targets in English and in some other subjects, such as history, with the purpose being of improve practice for myself and other staff and outcomes for students. However, if a student or member of staff wished to withdraw from the research for whatever reason, they were within their rights to do so. If this was the case, although none have withdrawn to date, for any individual, I would not have used any details, quantitative or qualitative data collected appertaining to their person, achievements or opinions. For a student, their withdrawal would not harm their progress nor affect the way they are dealt with in class; I would just not include any of their details in my written research. Similarly, if teaching staff chose to withdraw from participation, it would not harm their interaction or professional standing with me, I would merely not include any of their comments or input within my research. I also tried to ensure that I did not put any student or staff member under undue stress due to their participation in this piece of research. I strove to respect each participant, whatever their age or role, and take my professional responsibility and duty of care seriously by checking out any concerns with my supervisor and my Head Teacher (Thomas, 2013).

3.5.3 Confidentiality

Several confidentiality issues were addressed within this piece of action research. Ensuring anonymity was my first responsibility. I used pseudonyms for students and staff, allowing students and staff to choose their own pseudonyms.

Pseudonym	Gender identity	EAL
Bean	M	N
Robert	M	N
Kim	M	Y
Alexa	F	N
Naruto	M	N
Mia	F	N
Claire	F	N
Ferry	M	N
Richard	M	N
Zoe	F	N
Lisa	F	N
Jay	M	N
Jemma	F	N
Jessie	F	Y
Vanessa	F	Y
Finn	M	N
Robin	F	N
Juan	M	N
Gilph	M	N
Monika	F	Y
Rosie	F	N

Lottie	F	N
Mildred	F	N

Figure 24: Student Pseudonym against gender and EAL status

When the students were given the choice of choosing their own pseudonyms, it created much hilarity and excitement, as they tried to think up outlandish names. (Refer to figure 24 above). I made a few rules: the name had to reflect their birth or chosen gender and they were not allowed to choose the name of anyone in the room. I gave them each a small piece of paper on which to write their own and chosen name. I suggested they kept the names secret, but many shared them with their closer friends. Some of the boys chose foreign names, this made me a little concerned as to whether it would influence readers as to their nationality or gender; I had three EAL [English as an Additional Language] students in my class and did not want to skew the results for readers. Interestingly, the EAL students I did have in this class chose English sounding names for themselves. I subsequently chose to include the pseudonyms they had chosen, refer to figure 25, and I cross-referenced to EAL data. It was an enjoyable lesson as they also asked many questions about the research and their involvement and whether they could read it once it's published. This event seemed to spark more motivation in the students, as they appeared keen to engage with their pseudonym personas. One student told many of his teachers, with a form of pride, that he had chosen the name Juan for my study.

In addition, I ensured the protection and confidentiality of all data I collected and handled. The data I collected was only used for the purposes of my research and will be destroyed immediately after the project is completed and marked, which I anticipate will be 2021. The data I collect will be kept securely and any sensitive data will be password encrypted. Data will not be given to others or passed on for other purposes.

3.6 VALIDITY AND RELIABILITY

In order to ensure validity I checked that the 'outcomes / results correlated with the theoretical construct for which it is seeking to act as an assessment' (Thomas, 2013, p.140). This meant ensuring that the idea of a coherent and well-structured essay, which I sought to measure through

essay writing and mega-cognitive understanding of the students, was indeed a coherent essay according to the staff in school. Thus, the participation and collaboration of staff at the start of the research was important in setting up the definitions of a coherent and well-constructed essay. (Refer to section 3.2.2). My colleague Penelope read and assessed students' essays using the essay criteria assessment tool as a form of comparison and validity. (Refer to My Findings Chapter section 4.2.1).

In addition, the evidence gathered from other staff in forms of their comments and reflections on the SCOBA and orientating charts, and the reverse modelling staff development session which I led, helped make this action research more valid. It reinforced that it was not just my opinion, but others agreed and were willing to trial aspects of my research within their own classrooms. Collaboration with other staff was helpful in pin-pointing any experimental validity problems; Additionally, ecological validity (Cohen, 2018) was strong since the study was carried out in a real world secondary school setting.

As for generalisations, as mentioned at the start of my Methodology Chapter, WS secondary school was part of the School and College performance tables, based on similar school groups according to prior attainment of pupils; it might suggest that what I have found in my research here in WS might work or have a similar affect in one of these similar schools from this group.

This methodology chapter has attempted to use 'thick description'(Denscombe, 2010, p.271) through a narrative and explanation of what I did during my data collection period showing my 'continual process of refinement' (Denscombe, 2010, p.271) through the development of Gal'perin's SWP and the aim of creating a SCOBA. My next chapter describes my findings as I interpreted them.

4 FINDINGS CHAPTER

This chapter is separated into four sections:

- Baseline Findings
- General Findings using Gal'perin's Stepwise Procedure
- Case Studies
- Summary

I present all these findings chronologically. As previously explained, although I only did two SWP I also collected baseline data; this gave me three sets of data. The first cycle was the baseline collection, the second cycle was the first Stepwise Procedure, and the third cycle was the second Stepwise Procedure. To clarify how Gal'perin's Stepwise Procedure can be used in the classroom by a practicing teacher, I felt it was important to present my findings in this chronological manner. The case studies give a richer and deeper description of the impact of Gal'perin's Stepwise Procedure on three students. Within each section I will refer to my research questions and then make some preliminary conclusions, but I will fully describe how these findings answered my research questions in the next chapter entitled Discussion.

Gal'perin's research, verified by Talyzina (Haenen, 1996), showed that students made more progress when the SCOBA for the Stepwise Procedure was general, complete, and guided constructed. In Markova's article: 'A strategy for forming learning motivation' she found that students who had a full overview of the entire plan of action, its objectives and the assignment or outcome, were more motivated, especially when the teacher saw motivation as a 'special task' during the lessons and 'continually reinforced' objectives to them. (Markova, 1990, p.281). I felt that by presenting the findings in a chronological manner it was easier for the reader to appreciate how the development of essay writing skills and a common language for learning, or educated discourse, corelated to the stages of Gal'perin's Stepwise Procedure .

My research questions:

> Research Question One: How might Gal'perin's Theory of Systematic formation of actions and concepts and his Stepwise Procedure, including the SCOBA and orientating chart, enable students in English Language lessons to develop their essay writing skills?

Research Question Two: How might using Gal'perin's Theory of Systematic formation of actions and concepts and his Stepwise Procedure, including the SCOBA develop or contribute to a common educated discourse for English language essay development in a secondary school?

In general, my research shows that using Gal'perin's Stepwise Procedure and his SCOBA over this data collection period did help students create an educated discourse for essay writing and make progress in their essay writing skills, according to the criteria, the ECAT, established by myself and my two colleagues. Refer to the Methodology Chapter section 3.2.2.

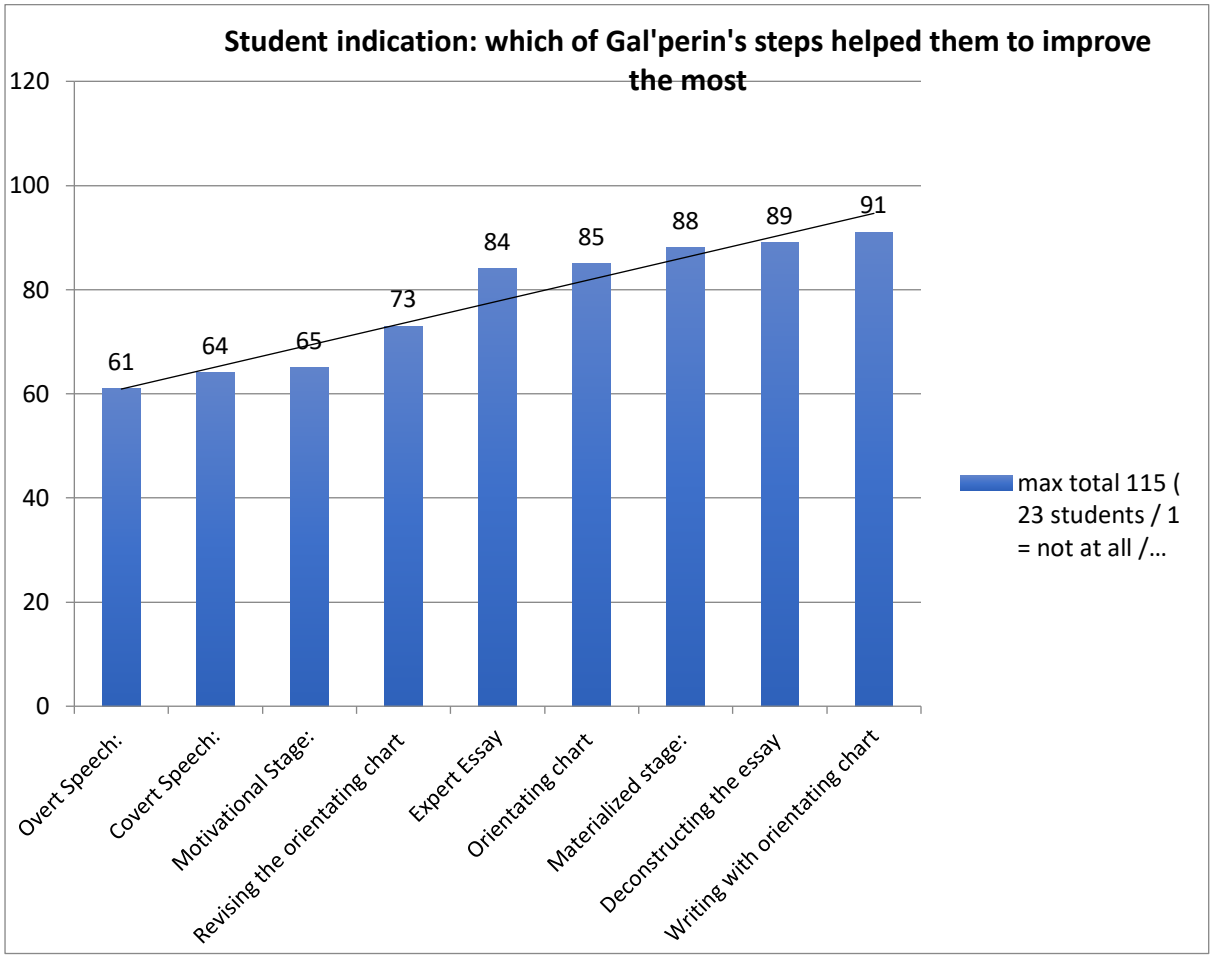


Figure 25: Graph showing student response to a questionnaire asking which of Gal'perin's steps within the Stepwise Procedure helped them the most to write their essays.

However, in the final questionnaire I asked the students to indicate which stages of the Stepwise Procedure they felt had been most beneficial to their improvement and development in essay writing and educated discourse for essay writing. Figure 25 above, shows the students' response to that final questionnaire. It clearly shows that the students considered the orientating chart to be the most beneficial element within the Stepwise Procedure. This confirms Gal'perin's opinion that the orientating chart was the key that enabled students to learn 'unexpectedly [and] easily in action in the process of problem solving'. (Gal'perin, P., 1989 (1974), p.70) or as Haenen described it a 'tool of action' providing a 'cheat sheet' for students to 'execute the learning task' (Haenen, 1996, p.135). The second most helpful element, as identified by the students, was the deconstruction of the essay. Both elements are part of the Orientating Stage of the Stepwise Procedure. Gal'perin was clear that the orientating stage was very important for the learning of the students, that the orientating stage should be a Scheme of a Complete Orientating Basis of the Action – SCOBA – in such a way that the student is given verbal and physical demonstrations of the outcome to 'form a picture of the circumstances, mapping out a plan of action', (Gal'perin, P., 1989 (1969), p.28) with all the 'necessary preliminary knowledge' in a 'schemata for a complete orientating basis of the action' so that the student would understand everything about the task before he started and thus be guided by the schemata to complete the task 'correctly'. (Gal'perin, P., 1989 (1974), p.71).

Neither of the speaking elements of the procedure: Covert speech stage and the Overt speech stage, were ranked highly by the students. This is an interesting finding which I will discuss later in my Discussion Chapter, as according to Vygotsky, external social speech was not just a necessary part of the Zone of Proximal Learning but vital: 'social speech becomes the source of thought' (Haenen, 1996, p.141).

Since the students indicated that certain aspects of the Stepwise Procedure and helped them more than others, it is these areas that I will focus on in this Findings chapter. But before I start, I need to clarify the tool that I used in essay assessment.

Essay Criteria Assessment Tool	
An introduction – focus to ground the whole essay	
Paragraph structure: Linking phrases – discourse markers	
Paragraph structure: grouping ideas – forming coherence	
Paragraph structure: logical order for ideas; fluidity	
Paragraphs: your argument justified	
Paragraphs: counter argument / balance	
Paragraphs: destroy counter argument / bias	
Conclusion: summary / both sides	
Conclusion: sophistication of argument	
Language: succinct, precise	
Tone: Conviction and Confidence	
Tone: of being in control of the essay	
Maintaining Point of view throughout	
Maintaining Point of view: Key words	
Spelling	
Punctuation	
Grammar	
Completed essay	

Figure 26: Essay Criteria Assessment Tool

The essay criteria assessment tool I developed was created through collaboration with two of my colleagues. The aim was to try to identify the elements of a cogent and well-structured essay, I asked two English teaching colleagues to collaborate with me in discussing and identifying the various criteria elements for an essay. I met with Penelope [P] and Julia [J] and recorded our 13 minute discussion. What emerged from this discussion was an independent set of elements and that we expected to be part of a good essay; I refer to it as the Essay Criteria Assessment Tool (ECAT). This was Referred to in detail in Methodology Chapter Section 3.2.2. I use the word independent here loosely, as although we obviously were influenced by our knowledge of GCSE and Key Stage 3 criteria, we tried to identify elements that we recognised as making an essay well structed, cogent and focused.

4.1 BASELINE FINDINGS

The baseline essay was used to provide me with a comparison for the students' improvement of essay writing. I wanted to find out what the students could do themselves before I started Gal'perin's Stepwise Procedure. Before I started, the baseline essay, I felt it was necessary for the students to be given some information about the outcome and aim of the essay. I, therefore, spoke

about the objectives and rational behind the baseline essay and showed these bullet points on a Power point slide show:

- To write an essay from scratch without any help or support from the teacher or each other.
- To create baseline essay of what you can do without specific teaching or support from which we can then see your progress over the year.
- To write about five paragraphs as well as you can.
- To not be worried or concerned that this will look like a failure or in any way cause the teacher to consider you not capable of writing an essay.
- To not fear the task but have a go anyway.

For the baseline essay task, I chose an authentic GCSE task that I had used before with previous classes:

> *Your local councillor has made the following statement: "Children of school age should not be working at all. They should be focused on their schoolwork and helpful to their parents. Working for money comes later." The councillor will take part in a debate at your school. Write a speech in which you argue your point of view in response of this statement.*

With hindsight, however, the fact that it needed to be written in the form of a speech unnecessarily complicated the task. Furthermore, the lack of support detail, practice and scaffolding caused many students to feel unsure of what they were doing and as a result some felt unable to finish their essays and only wrote a few paragraphs. This highlighted the fact that students were used to being given a scaffold by a teacher, rather than developing the plan and ideas for themselves. These students were nervous about producing an essay without the direct support of a teacher, inferring a fear and passivity on their part; a fear perhaps of doing things wrong within the essay and not gaining good marks and passivity in relying on others to direct them rather than the hard work of creating something themselves. For the research purpose, however, it proved successful, as I gained a baseline essay from which I was able to compare and assess the students' development and progress over the data collection period.

Although I was aware that the students would have been taught how to write an essay several times since starting secondary school, I used a questionnaire (refer to The Appendices section 8.1) to identify their previous experience and their thoughts about writing an essay without any scaffolding. The results enabled me to assess their levels of confidence and areas of weakness. The following paragraphs refer to questions asked in the questionnaire, where I was trying to learn about their previous essay experience.

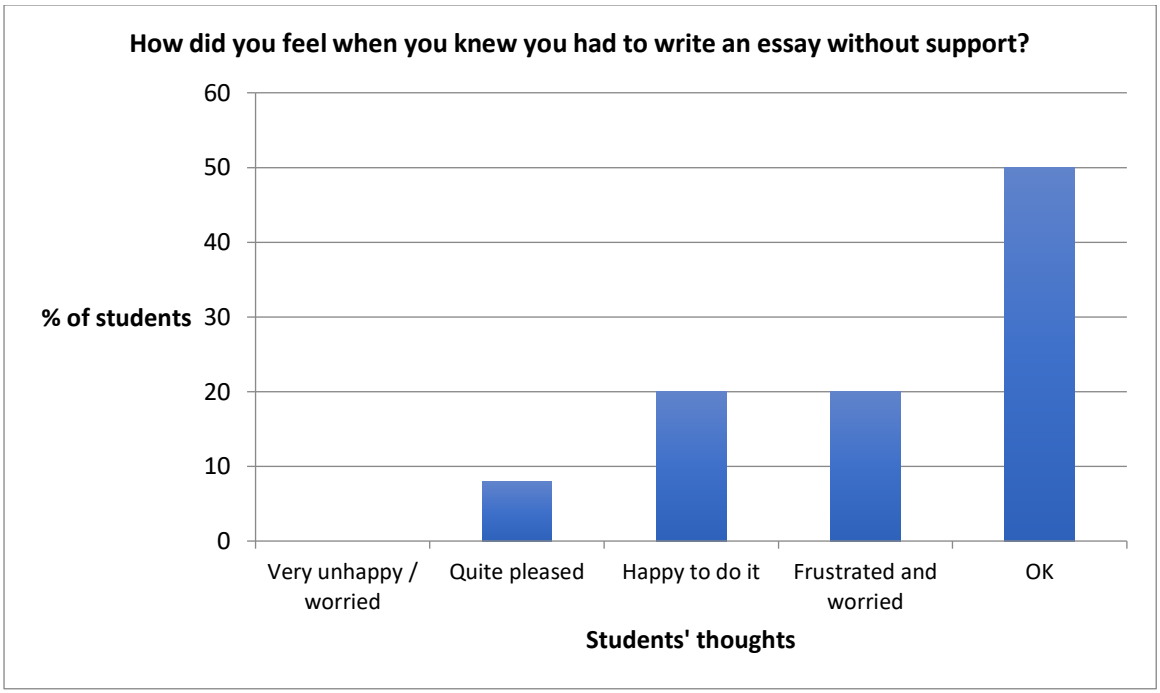


Figure 27: Bar Chart showing Student response to the Baseline essay writing process.

The students' lack of confidence in essay writing was supported by my own observations during the writing of the essay. I noticed some students looking worried, concerned and taking a while to start writing. In response to the questionnaire question: How did you feel when you know you had to write an essay without support? (Refer to Figure 27 above). 20% of the class – five students –indicated on their evaluation sheet that they had been 'worried and frustrated' about writing the essay, the majority felt 'OK' or better as in: 'quite pleased' or 'happy to do it'. All the students tried to respond to the task, although not all completed the task, 13 students or 54% of them did not complete the essay and did not write a conclusion. Perhaps the response of some students who felt 'worried and frustrated' (refer to figure 27) can be understood in the light of the research by Wood et al 1976, highlighting how some students felt they were lacking the teacher's scaffolding 'keeping them in the field' and 'deploy[ing] zest and sympathy to keep [them] motivated. (Wood, Bruner and Ross, 1976, p.89). Again, this underlines a lack of resilience in the students. They needed the 'zest' and 'sympathy' of the teacher to keep them 'motivated'. One might suppose that the students, at the age of 13 and 14, were more able to self-motivate and self-regulate their own learning, rather than rely on the teacher like the pre-schoolers in Wood's research. (Wood, Bruner and Ross, 1976)

How many times have you been taught to write an essay since year 7?	
Number of times students have written an essay	Students in my Year 9 Class.
7 or 8 times	2
5 or 6 times	4
3 or 4 times	10
1 or 2 times	3
Not many times	1

Figure 28: The amount of times Students thought they had been taught how to write essays

The students in this cohort were just embarking into Year 9. Figure 28 above, shows that 13 students, just over half, said they estimated they had written four or less essays in their two years in secondary school, whereas 6 students thought they had written at least 5 – 8 essays. This includes those students who recalled writing essays in other subjects, but of those only 6 thought they had written essays in history and four thought they had done so in other subjects. This could be due to the variety of teachers who taught history; during the data collection period, as there was only one specialist teacher of history and two non-specialist teachers of history. This pinpoints year 9 as a particularly important year for developing essay writing, as many students do not seem to have had a lot of practice, nor do they appear to have much self-regulated learning behaviour, they are still keen to rely on the teacher instead. With the introduction, (in 2017) of the new, final assessment GCSE exams, students are now faced with many essay-style questions, and these students will have to write up to nine essays for their English Language and English Literature exams combined. This makes it critical that students have been well prepared in the art of essay writing and perhaps year 9 is too late to start developing the self-motivation and meta-cognition needed to write this type of exam essay with ease and confidence.

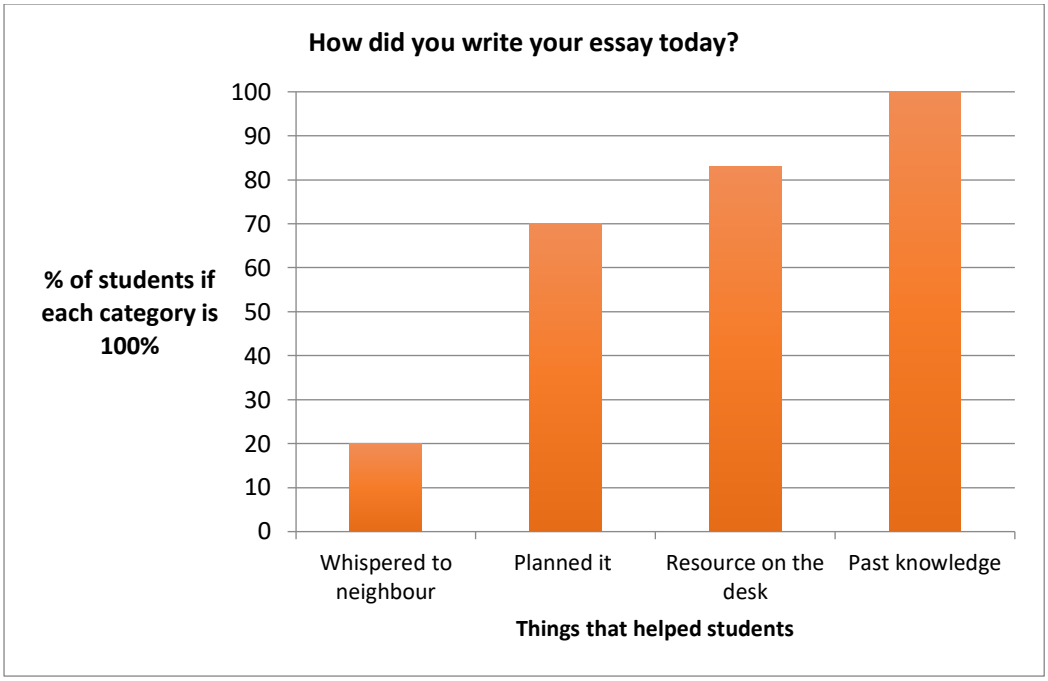


Figure 29: Bar Chart showing student response to what they used to write their baseline essay.

All the students agreed that they had used past experience to enable them to write the essay, this included their past essay writing in English, History and other subjects. In addition, one boy, Naruto, mentioned that he had been part of the Brilliant Club. The Brilliant Club was a project in the school whereby two PhD students from Southampton University came and taught a group of gifted and talented Year 8 students how to write a 3000-word essay on a topic of their choice. This highlights the way that students can, to a certain extent, transfer their previous skills into new situations without any support or help.

I had deliberately left classroom resources on their desks, such as: a dictionary, a thesaurus and a literature help sheet, to see if students would use these items to support their essay writing. I found that over 80% of students used these resources. (Refer to Figure 29 above). This shows how these students took initiative to uses resources around them and not just to rely on past experience to help them. This supports the fact that these 80% of students were motivated to write an essay as they actively used resources to help them complete it to the highest standard that they could.

Planning is an important aspect of writing a cohesive and logical argument. Fortunately, most of the students recognised this, perhaps having been taught this technique and were able to transfer this skill to this task. 30% or seven students, however, indicated that they had not planned before

starting to write their essay. 58%, 14 students, showed evidence of their planning on the sheets of paper I had given them, the other 12% said they had planned in their head before starting their essay. Their planning was quite interesting, as many of them were far from detailed and certainly did not in any way get near to the complex and detailed orientating chart which Gal'perin proposes helps students to achieve.

One student planned in two sections: 'For' and 'Against'. Three students planned in the form of a spider-gram. Four students planned with a list of bullet points of ideas, whereas six students planned in paragraphed sequence. Three of them wrote it in a very short and stilted manner, for example, Jessie wrote:

1. *Paragraph – opening*
2. *Paragraph – age / social life*
3. *Paragraph – school*
4. *Paragraph – later money and* parents
5. *Paragraph – conclusion*

Whereas Monika, Juan and Alexa wrote more detail after each paragraph number, for example, Monika wrote:

> *'Paragraph One: introduce yourself at the start of the speech and the question / statement you are going to be discussing.*
>
> *Paragraph 2: say whether you agree with the counsellor or not and add at least 2 reasons.'*

Juan wrote in a more informal manner:

> *'Paragraph four: state that some kids are saving for university or transport to get there - eg. cars'*

Those students who indicated that they were more used to detailed scaffolding and / or sequenced plans, did not, except in one case, create a detailed plan before they started writing. But only Jessie, who had indicated that she expected detailed scaffolding from the teacher before starting an essay, created a detailed planning sequence before writing. I found that three of the students: Mia, Finn and Claire, who had said they were used to detailed scaffolding from a teacher, did not, in two cases, Mia and Finn, make any plan on paper and in one case, while Claire, only created a very brief plan. For example, Claire wrote:

> *'Planning: school or work?*
>
> *Go, more against work and for education.*

A lot of people do not get a chance to go to school and they have to work and get very little pay.'

This evidence demonstrates the underlying passivity of students who rely on scaffolds and support from the teacher, rather than learn how to develop it in collaboration with the teacher or others or create it themselves. Robert, Alexa, Monika and Juan all recalled having at least a lesson during which the essay plan was explained, and suggestions were given of what to include. Naruto did not recall any instructions, scaffold or talk about how to write an essay and in answer to the question: 'How many times have you been taught to write an essay since year 7?' he answered: 'maybe a few times in English'.

Some students wrote extra comments on their evaluation form which seemed to reinforce the dangerous stereotype of intelligence, 'everyone has a deep seated and unchangeable amount of intelligence' Dweck and Master in (Schunk and Zimmerman, 2008). These comments seem very vague and inexact, as if essay writing is innate knowledge that only some possessed. Two students, Lottie and Robert, used the term 'common knowledge' to describe how they managed to write their essay, while Gilph and Mia commented that they 'just went with it', implying that the essay somehow might have flowed out of them onto the page. If this were true, it would mitigate the need for meta-cognition, there would be no need to teach students to understand the process of learning and to evaluate their own learning process. (Markova, 1990) It also perpetuates the myth that only the brainy are able to write well developed essays. (Dweck, 2008)

As a teacher in a WS classroom, a 'scaffold' is a term for a general purpose chart or help sheet which is created by the teacher to enable some students to write in a structured way. I was, therefore interested in what previous experience the students in my class had had of 'scaffolds'. The first questionnaire, in the post baseline questionnaire was: What scaffold or support would you normally expect from a teacher?

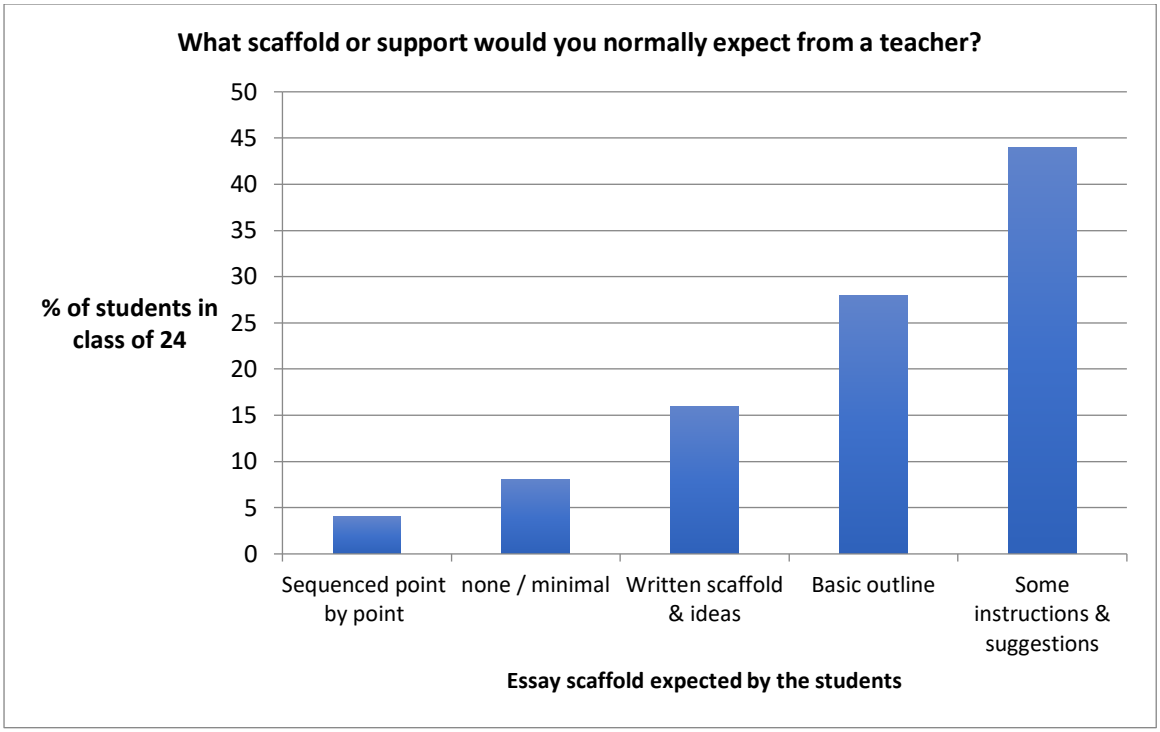


Figure 30: Student response to: What scaffold or support would you normally expect from a teacher. This question was in the end of baseline data questionnaire.

Figure 30, above, shows the response of the students to that question. 16% of the class were used to extensive scaffolding for their essay writing, in fact, only 8%, that is two students, recalled having no or minimal help, while two thirds of the class were used to being given some kind of instructions in a series of lessons, explaining the essay and the expected essay structure. This confirmed my experience in WS school, that some teachers use a scaffold in the classroom in some manner. It shows that some of the students were used to this terminology and this sort of support in writing elongated pieces of work. I did not ask them, however, whether they had developed these scaffolds with the teacher or whether they had been given these scaffolds by a teacher and then had to use it on their own. Gal'perin consistently talks about involvement of teacher and student in this process of creating the scaffold or in his vernacular 'orientating chart.' His research showed that the teacher mediating with the students in creating the orienting chart enabled students to move towards a mental stage of automation and eventually to transfer skills to other similar tasks (Gal'perin, P., 1992 (1978)). Despite the use of past scaffolds, the scaffolds had been given to them without any collaboration or student involvement and thus many students did not feel confident enough to be automated in writing the baseline essay. They had not assimilated the essay rubric enough to transfer those skills and write an essay in this different situation.

Student motivation, as discussed in my literature review, is hinged on the 'tutor's role as an activator,' (Wood, Bruner and Ross, 1976) and I was an activator in this situation. Although I did not provide a scaffold for the baseline essay, I did explain the purpose and reasons for this baseline essay and reassured them that their essays would only be used for research purposes and not for school report data. Many students were anxious about writing without a scaffold, and specifically asked whether this result would appear on their school report data. This, unfortunately, indicates the position of many students in school, that it is not the learning that is the focus of attention but the grades and ultimately the school report data.

I will now cross reference this data with the results of the baseline essay and I will analyse whether the previous scaffolding has helped or hindered students in writing better essays.

I assessed the baseline essays using the Essay Criteria Assessment Tool (refer to figure 26). This enabled me to ascertain both the skills missing from these students' essay writing abilities and their capabilities as individuals. In general terms, I could identify where the students needed the most teaching to bring them up to the level of essay writing ability which myself and my colleagues had designated was appropriate for this project. I used the assessment tool as explained earlier and transposed it onto an Excel spreadsheet. Each student could attain a total of 54, but I did not want to show a student leader-board, I wanted to focus on skills that needed to be improved. I therefore turned the excel spreadsheet around so that the skills were the most important. Out of 18 skills, each having a maximum of three points and there being 23 students in the class, the maximum for each skill was 69.

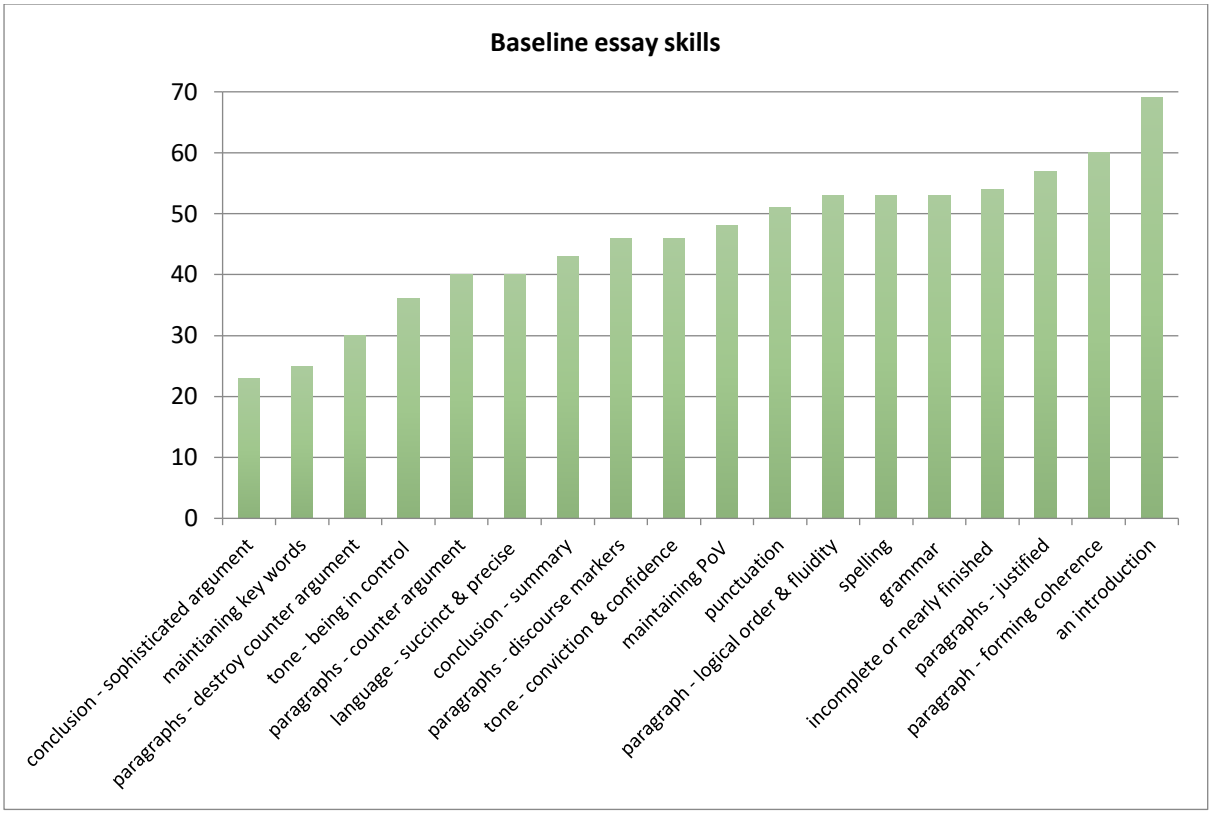


Figure 31: Bar chart showing class skills in baseline essay

The resulting bar chart, (refer to figure 31 above) enabled me to analyse their capabilities. For example, all students were able to write an introduction and showed an ability to write words on a paper which were approximate of an argument essay. Most students, apart from Kim, attempted to paragraph in a logical order and sequence, and 16 of them, 66%, were able to create paragraphs that grouped ideas together forming coherence to their argument, the other students attempted to do this with varying degrees of success. This shows that all the students, bar one, had a basic understanding of sequencing and developing their argument through a paragraph structure. 15 students attempted to use discourse markers. Discourse markers had been a particular teaching point not only within the English department, but also across the whole school over the previous two or three years. The literacy sheet that was on each desk had a list of discourse markers and as mentioned previously some students made use of this resource. The fact that only four students: Bean, Kim, Finn, and Lottie, did not use any discourse markers, perhaps shows some level of success of this previous school focus. Although it is interesting to note that Bean indicated on his evaluation sheet that he did refer to the literacy sheet (an A4 card with punctuation, paragraph, discourse marker and spelling tips that had been created by WS school in previous years) but obviously Bean did not make use of the discourse marker section.

The five lowest skill areas were: concluding with a sophisticated argument; maintaining Point of View using key words; destroying the counter argument; creating a convincing tone and appearing in control of the essay; creating a counter argument. Half of the group attempted to create paragraphs that included counter arguments, but only two students, Jay and Mildred, were successful in achieving this. Nine students completed their essays to the point of writing a conclusion, however, no student managed to conclude with a sophisticated argument.

Four students had achieved under 60% in the overall skills assessment: Zoe, Mia, Bean and Monika. These students did not feel particularly confident about writing the baseline essay. Mia and Bean had expressed they were 'frustrated and worried' about the baseline essay writing, although they both recalled having written essays up to six times previously, whereas Monika and Zoe indicated they felt 'OK' about writing the essay. Mia, Bean and Monika were all expecting more scaffolding for the essay and Mia indicated she expected: 'point by point ideas of what to include in each paragraph and explanation of how to write the essay'. Zoe recalled only writing essays after reading a book in English and did not recall having any scaffold before writing the essay. All four students said they did plan their essay, although Mia admitted to merely thinking up her plan in her head and did not write anything down. None of the four finished the essay in the time allowed, 45 minutes, although Zoe and Monika wrote more, three paragraphs, than Mia and Bean, who only wrote two paragraphs. Bean and Zoe had attempted a counter argument. These four students highlight the lack of essay writing skills and the need for specific teaching of these skills. These students demonstrate the need for developing confidence through clear skills teaching and metacognition of the skill they are learning.

This lack of confidence and lack of essay development seems to corroborate Galperin's argument about the lack of full orientation given to students by teachers. Gal'perin argued that the lack of a Stepwise Procedure and merely partial disclosure of an Orientating stage led to 'trial and error teaching' which precluded cognitive awareness and student independence 'there is no more independence here that in the case of a billiard ball that careens about under the influence of the momentum given by things it caroms off of' (Gal'perin, P., 1989 (1974), p.69).

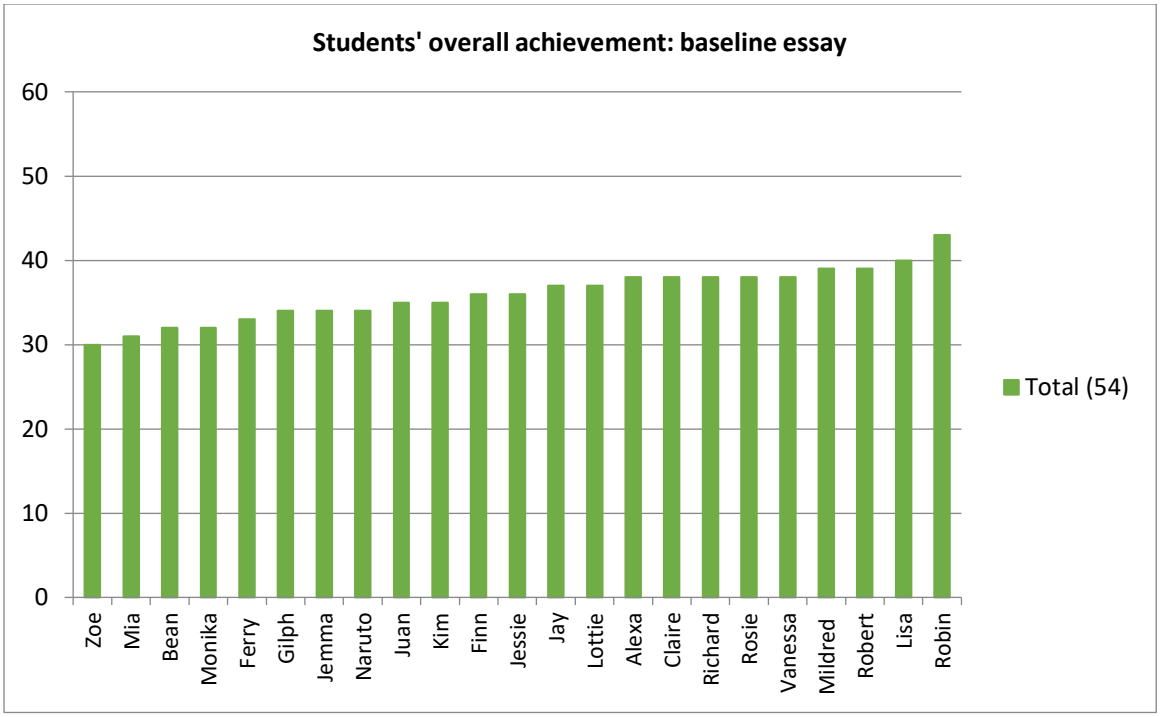


Figure 32: Bar chart showing individual student achievement in the baseline essays.

Each student was given an opportunity to evaluate their essay and their score out of 54. I had stuck the essay skills criteria and mark sheet in their books next to their essays. In order to promote motivation, I asked them to evaluate their essays and write down how they could improve their own marks. (Refer to figure 32 above). I did not show this leader board to the class. Despite the clear criteria stuck into their books, some students did not recognise or perhaps understand the relevance of the different elements assessed or that these could indeed help them improve their essay writing. For example, Zoe wrote: ' I could improve my essay by improving my spelling, punctuation and grammar.' Four other students, Lottie, Mildred, Alexa and Rosie, also commented on this same area for improvement, without mentioning any other element. Again, this reinforces the lack of meta-cognition of essay writing. They do not focus on the elements which are new to them, or difficult to attain, they focus on a skill of which they are already aware, SPAG. Other students, however, seemed to grasp the idea of identifying key skills they needed to improve. For instance, Vanessa wrote:

> 'To improve I need to structure my paragraphs more effectively and also use more discourse markers at the start of each paragraph. Introduction: my own opinion summary – not detailed – and my discourse markers should indicate the progress of the essay and show links and fluid logic between the paragraphs.'

The students who seemed to grasp the different concepts within the essay writing process were more motivated to improve, indicating a burgeoning meta-cognition of the essay writing process.

This baseline analysis enabled me to set the teaching schedule or Materialised Stage for the implementation of the first Stepwise Procedure. I concluded that counter argument and destruction of that counter argument were paramount for focus. Students also needed to understand how to Justify their own points and use of discourse markers effectively. Students needed a better understanding of tone and how to use language to sound confident and succinct.

Many of these students seemed to think that their essay would be 'ok' because they had 'planned it in their head' or 'just went with it'. 16 students referred to 'past knowledge' or 'common knowledge' in the form of lessons, models or own knowledge that helped them to write the essay this time. The evidence from the baseline essay shows the students did not understand, because they had not been taught the meta-cognition of essay writing. This seemed to signify a need for enabling students to collaborate in scaffolding creation in order to understand the process of what they are doing, rather than relying on the teacher. This not only highlighted the need to break down the essay writing process into sections that every student can access, but also highlighted the need for meta-cognition of the essay writing process, in that if they are to improve, they need to understand the process of writing. In the next section I share the findings from the first cycle of Gal'perin's Stepwise Procedure. Gal'perin's insistence in a detailed Orientating Stage and supportive orientating chart, gives the opportunity for an extended scaffold to be developed by students and teacher.

4.2 General Findings using Gal'perin's Stepwise Procedure

4.2.1 Stepwise Procedure One

In order for the action to be learned and executed without errors, it was important, according to Gal'perin, that the students saw 'the form of the action … demonstrated by a 'craftsman' (Gal'perin, P., 1989 (1974), p.69). I therefore used the Expert essay as a model of how I wanted the students to write. It proved a successful tool in the Orientating Stage as it showed the outcome. I also used it in the material stage as students dissected it and reworked it as they analysed and practiced relevant elements of essay writing.

The first expert essay was entitled: 'Do children need two biological parents?' (Refer to The Appendices section 8.2.1) I abridged it by cutting it down to about 750 words and changing it to

include more obvious structural elements. I then sent it to colleague, Penelope, who viewed it and commented: 'That reads well, I looked particularly at discourse markers and structure and it flows nicely - it works well as a model'.

Persuasion not manipulation
Not criticizing but show them how good your idea is
Pointing out why their idea is wrong and giving reasons or justifications for how to do it better
Don't personally attack them- attack the issues
Call your opponent Friend – keep your friends close but your enemies closer
Confidence – strong minded
Open to other ideas – don't go into a meeting thinking you are right, listen to others they might have a better idea
Ask opponent questions so you can encourage participation, and hear each other's ideas
Give examples of how your idea would work
Refer to things in history – remind them how it did or didn't work out
Make sure you know what you are talking about, do your research fully, explore all the options
Attack weak spots in opponent's argument
Cherry pick good points – but for bad points think of a reason to back them up – why they are not that bad.
Compare the good points of each side of the argument
Personal experience
Statistics and information
Each sentence starts with a different word and often with a connective (mostly throughout the essay)
In conclusion – repeat argument using different words – last sentence a summary answer to the question posed. Last sentence suggesting far reaching consequences into the future
Discourse markers - at start and often within paragraphs

Set in time and place – contextualise

Figure 33: Student list of argument skills before deconstruction. After deconstruction they added extra elements, these are highlighted.

Before reading the first expert essay: *'Do Children need both biological parents,* (refer to The Appendices section 8.2.1) I asked the students to write a list of elements they expected to see within an argument essay. (Refer to figure 33 above).

This list proved invaluable throughout the whole data collection period and we referred to it often, especially when creating orientating charts. It suggested that the students had a good working understanding of some of the principles of how to conduct an argument and some of the elements needed to get a point across. However, it also showed they have little understanding of the educated discourse of essay writing as the language they have used is more conversational.

At first the chart consisted of general comments about writing argument essays, it was not until they had read and considered the elements within the expert essay that they were able to identify some specific essay writing elements and patterns, such as: discourse markers; paragraphs; summary and conclusion. I have added these to Figure 33 above in grey highlighter.

To attempt a deeper deconstruction of this initial expert essay, I split the class into teams, each focussing on a different paragraph. I asked them to identify the different elements, by looking at words, phrases and within the paragraphs. During deconstruction of the essay, I realised some were struggling and they needed some scaffold to work with, so I gave them a copy of figure 33 and suggested they compared the two. I also encouraged them to try and identify whether the writer had done anything that was not in Figure 33.

Group A. Jay	Introduction and paragraph 2 The writer uses statistics. Confident with his ideas Gives examples Open to others ideas Refers to things in history He knows what he is talking about
Group B. Mia	Central paragraph Counter argument using: However. Use of expert quotes 'Furthermore' shows adding of information Other discourse markers within the paragraph show emphasis: naturally

Group C. Vanessa	Opening paragraph starts by referring to things in history Mentions time and place Uses factual information Discourse marker within the paragraph
Group D. Monika	Central paragraphs Good sentence starters Use of quotes Attack the issue
Group E. Richard	Conclusion Use of repetition to highlight opinion Repeats argument or PoV Attacks counter argument again Last sentence has a different tone to the rest of the essay
Group F Robin	Opening paragraph introduces opinion. Confident. In last paragraph it repeats the argument; adds to the argument; attacks argument. Reassuring and repeating argument in paragraph two.
Group G. Kim	Conclusion: Echoes personal experience from paragraph 5…
Group H. Naruto	Central paragraphs Pointing out what is wrong and justifying it
Group J. Claire	Central paragraph Use of statistics and percentages. Explains point. Confident about facts and statistics. Discourse marker used within paragraph. Points are compared and irrelevant points are made too.
Group K. Finn	Central paragraph Gives personal examples and varies connectives
Group L. Gilph	Central paragraph Gives own experiences to get his PoV across. Uses proof and statistics to prove the point is true. Variation of sentence starters. Use of good punctuation. True facts that people can relate to. Effective interesting adjectives. Repeats argument in this conclusion. Last sentence suggests

	consequences into the future. Last sentence a summary answer.
Group M. Mildred	Use of examples and statistics. All sentence starters are different. Uses good connectives. Uses variety of punctuation and colons. Used examples from his life so they are true and people can relate to them

Figure 34: Essay elements identified by groups of students from the expert essay.

During this exercise, the students worked in either pairs or threes. While they identified these elements, I asked them to write them into their exercise books or annotate and highlight the essay sheet. I took their notes home and created another sheet of their deconstruction of the essay. The names that appear on figure 34 above, refer to the person in the pair or group who wrote in their exercise books or annotated the sheet. This list above, minus the names, then became known as Essay Deconstruction Skills List 1. This list, figure 34, shows a much greater understanding of essay writing elements and shows a clearer ability to analyse elements within an essay. As Gal'perin himself concluded, pupils either orientated themselves to the overall shape or they were more analytical and 'spontaneously spotted indices' (Haenen, 1996, p.158) which would have to be reconstructed every time they wrote. So that groups: A,B, C, E, J and L all appear to have analysed the paragraphs and are able to identify specific elements having 'spotted indices', whereas the other groups appear to give a summary or overview of the paragraph. For example, Group H wrote: 'Pointing out what is wrong and justifying it' a summary style statement or overview of the paragraph, compared to Group J: 'Use of statistics and percentages. Explains point. Confident about facts and statistics. Discourse marker used within paragraph. Points are compared and irrelevant points are made too'. This group, although looking at the same paragraphs, were able to identify several different argument essay writing elements. Some students were already able to recognise elements and indices, they were beginning to orientate themselves to the essay design and structure. It implied that some were beginning to develop meta-cognition of the essay writing process, perhaps indicating that these students would find it easier to write the next essay. This also supports Gal'perin's insistence on showing students the work of a 'craftsman' (Gal'perin, P., 1989 (1974), p.69) during the orientating stage of the Stepwise Procedure. It highlights how the process of deconstructing a piece of work by an expert supported the students in identifying and naming key elements of essay writing, which is an important

precursor on the journey to developing quality essay writing skills and educated discourse of that essay writing.

In the final evaluation questionnaire (refer to figure 25 at the start of the Methodology Chapter) the students indicated that the deconstruction of the expert essay was the second most helpful task in developing their essay writing skills and some expanded explaining what they found helpful:

> Lottie: 'Picking apart the essay.'
>
> Zoe: 'Looking and evaluating the expert essay helped me because it gave me an idea of what my essay was supposed to look like'.
>
> Robin: 'Looking at the structure of an essay and understanding the different elements in each paragraph.'

Gal'perin commented, in his research, that the teacher needed to not only show a model of the outcome, but explain the purpose of each 'indices' or element and how the student can isolate each element in order for 'the learner [to] just know that's how it is' (Gal'perin (1957) p221: cited by Haenen, 1996, p.142). After the evaluation of the baseline essay, the students and I had identified several elements that they needed to improve. I, therefore, ensured that the students were specifically guided, by me, as teacher, to focus on the areas within the Materialised Stage.

4.2.1.1 Stepwise Procedure One: Materialised Stage

Within Gal'perin's Stepwise Procedure, the Orientating stage includes the orientating chart, but for the purposes of explaining and discussing my findings, I shall write about the Materialised stage first. This is because in order for the students to develop complete, guided-construction and general orientating charts, they needed to have more experience of the elements that made up the expert essay and practice creating various sections in a hands-on manner. I found that I needed to alternate between the Materialised stage and the last part of the Orientating stage, so that the students would understand what needed to be placed on their orientating charts and not just rely on me as the teacher to tell them what to put on their charts.

Haenen described the materialised stage as 'permit[ting] the learner to execute the action by using substitutes of the external physical objects.' (Haenen, 1996, p.139) According to Gal'perin it is the stage where the students have hands on manipulation of models, displays, diagrams, and

in this case, essay writing. The manipulation was the use of the constituent parts to create parts of an expert essay. These consisted of: How to write an argument essay: Pros and Cons; personal experience; attack counter argument; paragraph structure; discourse markers; introduction; conclusion.

Even though, according to my analysis of the baseline essays, discourse markers was an area within which all student needed to improve, I had assumed students would have encountered these words in year 7 or 8. I did not expect to have to teach this topic. However, I noted in my journal that when I brought up the topic of discourse markers as a recap starter, 'many seemed not to remember'. This discovery then led to an extra lesson being created to execute this task.

I therefore devised a student debate on 'The internet does more harm than good'. I emphasised how I wanted them to use discourse markers at the start of and within their paragraphs to develop cogency. This proved key in developing the students' skills of argument and their educated discourse. Working in groups they planned and developed ideas, writing collaborative paragraphs incorporating and justifying evidence. For instance, students used: firstly, secondly, above all and despite and were subsequently able to explain how they could have used them more effectively. Although it could be argued that the debate form enabled students to develop and practice the used of discourse markers, it also highlights the complex nature of the argument essay. Even though some elements are present within formats, such as the debate, it primarily is an oral argument and many students improvised ideas on the spot. This was successful from the point of view of developing ideas and arguments, but their oral debate lacked the structure that I was trying to convey to them.

An additional observation needs to be noted at this point. In my research journal, during the two lessons given for the debate (that was preparation and execution) I had written: 'Many did take time to think through evidence for their points, but some are too chatty.' This chattiness was a constant battle at times. I use the word battle because I was often concerned about whether their unfocused attitude belied a lack of motivation, a lack of understanding, or a lack of pace and as a result was continually encouraging them to refocus on the task. I will discuss this in more depth later in the Discussion Chapter.

4.2.1.2 Stepwise Procedure One: Orientating Chart

When I introduced the Orientating chart during Stepwise Procedure 1, the students appeared very pleased. Many had reported that they lacked confidence without a scaffold to support their writing. To create the orientating charts, I allowed students to work in their preferred pairs for this task, as I wanted them to feel comfortable discussing the way they would develop their orientating chart. As the mediator of this process, I explained to the whole class several of Gal'perin's features of the Orientating chart, with some of my own points to help them, refer to the list below. During the creation of the charts I attended to each group in turn with help and advice.

It is a cheat sheet
It is a terrible thing to look at
It should be a clear picture of what you need to do
Include everything to enable you to write an argument essay
Use the Essay Deconstruction Skills List – *refer to Table 3*
Use the expert essays
Cut up the sheets and glue on
Add other elements as necessary

I have included three charts to give examples of what they created. (All the orientating charts made by the students can be viewed in The Appendices section 8.4.)

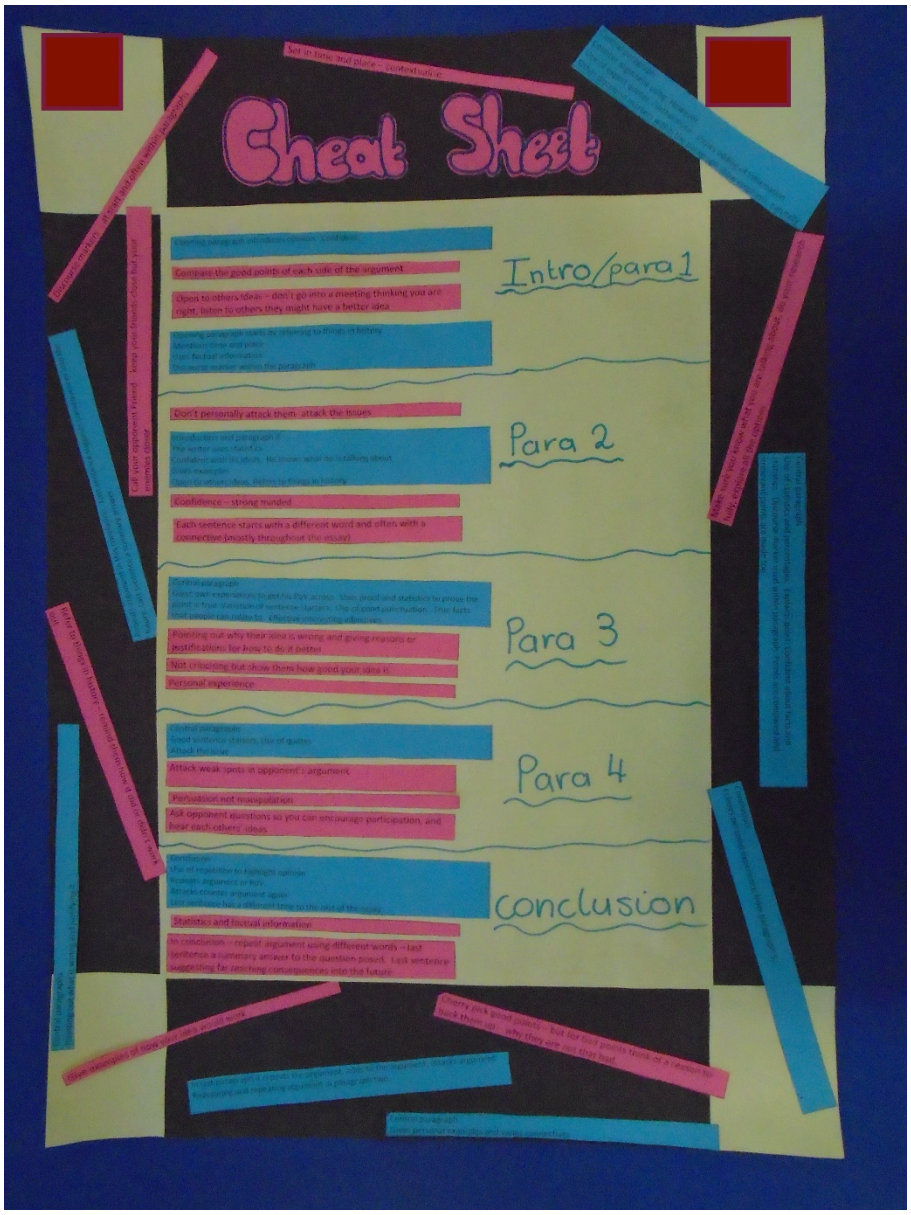


Figure 35: Orientating Chart designed by Zoe and Rosie

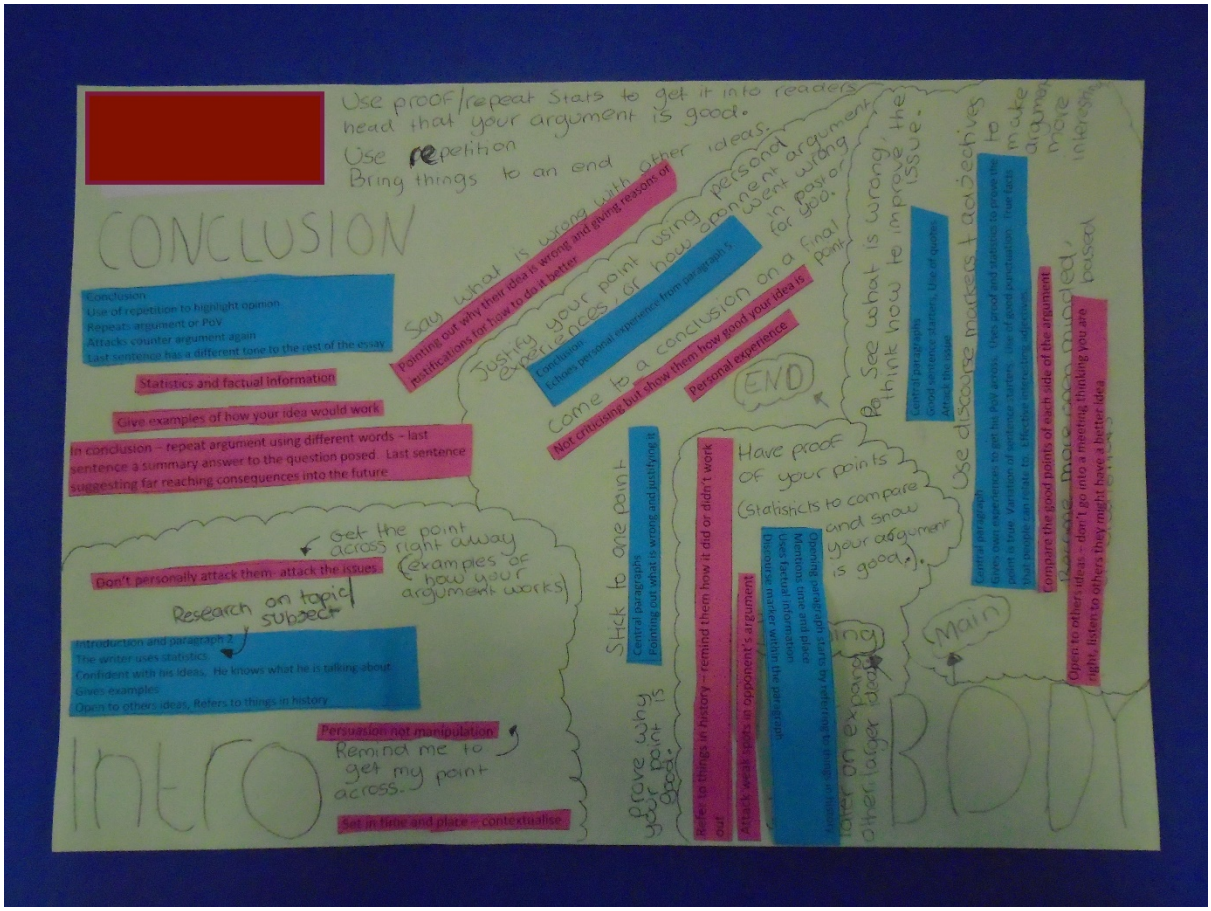


Figure 36: Orientating Chart designed by Gilph

During the lesson creating their orientating charts, the students were cutting and sticking, and seemed to enjoy the challenge. They were heard chatting randomly about the sequence of the essay, many using educated discourse to explain and discuss. Some students were being very systematic, going through each statement and putting it in order. Some were categorizing, some brainstorming. Many incorporated their own ideas and their observations of the first expert essay. The result was 11 different orientating charts. (refer to The Appendices section 8.4 to view all the orientating charts created by the students) In this section of the Findings I am only going to refer to three charts: Figures 35, 36, and 37. M

Most of the students, 16 out of 21, who were present for that lesson, chose to structure their orientating charts into sections or categories. Here are some of their comments written in their Orientating Chart evaluation questionnaire. Gilph: ' I put sections in my chart to help me know what to do in each individual part of the essay.' Zoe: 'We ordered it into different paragraphs.' Claire: 'We put our ideas into sections so it would be well organised, we put it in the order of the essay.' Robert: 'We put numbers above the information so you can read them in order.' I also asked the students to explain any extra information they had added to their sheet. Robin: '[We

used] subtitles so certain points fit into certain sections.' Jessie: 'We did give examples of intros, centrals and conclusions.' Lottie: 'We added the expert essay in the middle as for an example so it could help people structure their essay.'

Unfortunately, one student, Lisa, was absent for all three orientating chart lessons, and so was not part of this process. Another student, Ferry, missed the first Orientating Chart lesson, and had to work on his own the second lesson having only a short period of time to develop his chart. The students were very keen to ensure they had created a chart which contained a clear picture of what to do. Gal'perin was emphatic that the Stepwise Procedure should explain the purpose, properties and tools needed at a slow pace and should include 'of conditions for correct performance of the assignment … in the form of notations on a card.' (Gal'perin, P., 1989 (1974), p.69) and in 'so much detail that it becomes clear to the learner how the operations involved are connected to changes in the material' (Haenen, 1996, p.134) However, after I had examined the charts I was aware that, despite a previous focus on discourse markers, students had not included them onto their charts. Thus, before the students wrote their Stepwise Procedure One essay, I suggested that they might want to add a list of discourse markers to their orientating charts, and many did this.

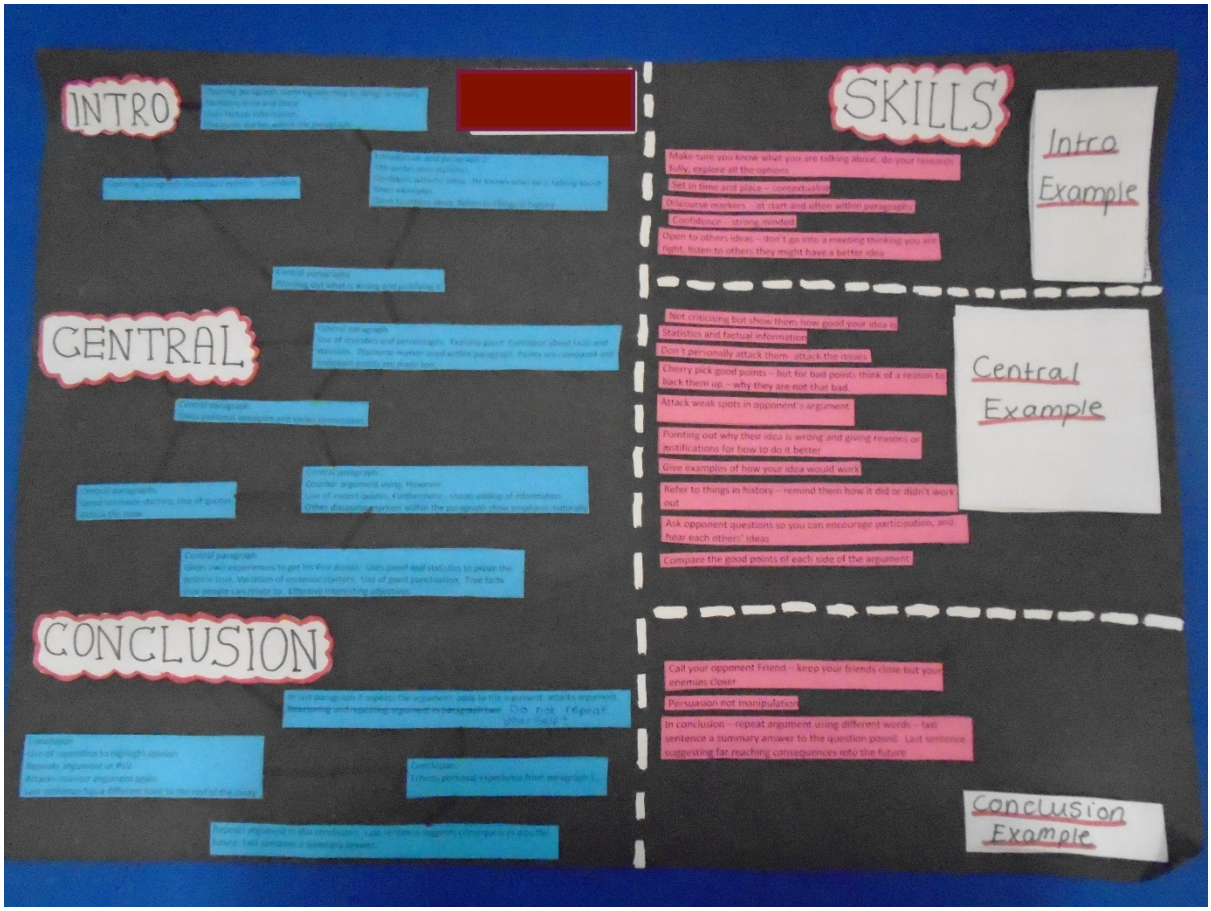


Figure 37: Orientating Chart designed by Vanessa and Jessie

One of my concerns, as a researcher, was the analysis of so many different orientating charts as scaffolds for the students' essays. After a conversation with my supervisor, I made the decision to ask them to examine each other's charts and choose the best chart to help them in their next essay assessment: SWP One. Nine students out of 21 wanted to use their own chart, but eight wanted to use Jessie and Vanessa's chart, refer to figure 37, including Vanessa and Jessie. Two students wanted to use Gilph's chart, including Gilph. Two students wanted to use Zoe's chart and one student wanted to use Claire and Mildred's chart. When I asked them to do a second evaluation two weeks later, just before writing Stepwise Procedure one essay, the class ended up choosing three different charts. Refer to figure 38 below.

Orientating Chart Design	**Students who chose that chart**
Jessie and Vanessa	Mildred, Monika, Alexa, Claire, Robin, Naruto, Zoe, Vanessa, Jessie, Jemma, Jay, Mia, Lisa

Zoe	Juan, Richard, Finn, Bean
Gilph	Gilph, Kim, Robert

Figure 38: Showing which charts the students chose to use

Gal'perin recommended that the orientating chart should be 'broken down into parts…in such a way that they can be easily followed and will ensure the rationality of the action.' (Gal'perin, P., 1989 (1974), p.73). And this is exactly the reasons students gave for choosing these three chart designs. Robin commented: 'Vanessa and Jessie's chart is laid out clearly with examples and the sections are split into different parts, e.g. Intro.' Monika wrote: 'I like Vanessa and Jessie's chart because it is laid our neatly and it was clear what they wanted to go into each paragraph.' Alexa said: 'Vanessa and Jessie's chart is organised and easy to understand.' Claire added: 'V & J's chart would be very easy to work on and use'. Gilph and Kim chose to use Gilph's chart: Gilph said: 'my chart justifies what / how to write and gives more information than just the typed sheets stuck on the paper.' Kim commented: 'Gilph's is well presented and has a lot of detail in it.' And for Zoe's chart, Bean wrote: 'I would rather use Zoe's cheat sheet because it boldly shows you what to do in each paragraph.'

4.2.1.3 Evaluation of Stepwise Procedure One

At the end of Stepwise Procedure One, and after they had written their essay, I asked the students to complete an evaluation questionnaire (refer to The Appendices section 8.1.3). The questionnaire was very similar to the post baseline questionnaire, but I included a question as to whether and how much they had referred to their orientating chart. I wanted to know whether they considered it to be a 'cheat sheet' as Gal'perin had intended, or whether they found it a hindrance. I was very interested in those who had chosen to use a chart which was not of their own making.

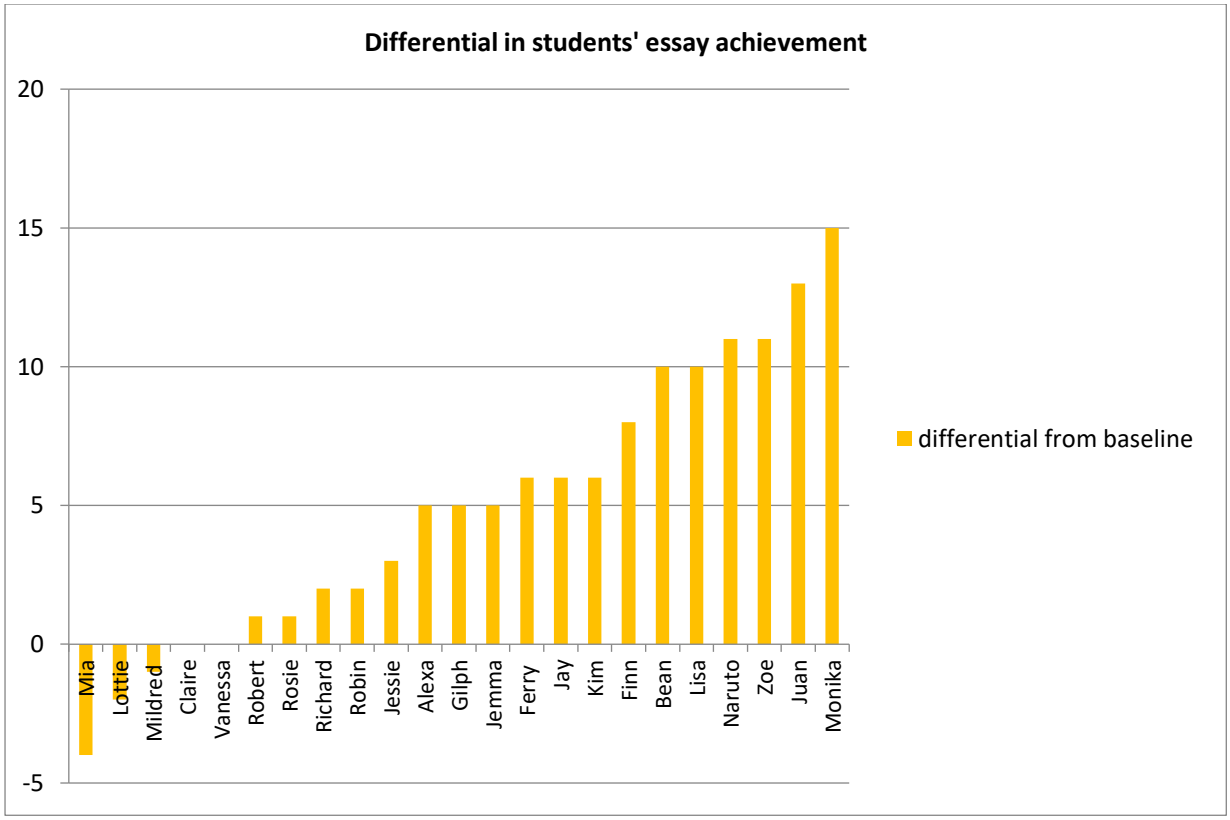


Figure 39: Graph to show the progress, or not, in essay writing skills after using the first orientating charts.

Despite the Orientating charts the students had chosen appearing easy to follow and including a lot of information, I was aware, through my analysis after Stepwise Procedure One essay, that either the orientating charts had not contained all the information necessary for the students to write essays in the style of an expert, or they had not referred to it (refer to Figure 39 above).

The top five improvers: Monika, Juan, Zoe, Naruto and Lisa had not all used the same chart – Juan used Zoe's chart – and Lisa had not even been present during the development of the orientating charts. The bottom five, four of whom did not do as well as they had in the baseline essay, had all used Vanessa and Jessie's chart. One could argue that perhaps they did not understand it as they had not made it, however, Vanessa also failed to make any progress.

On average, however, the students indicated that the orientating chart had been helpful rather than a hindrance, 61% responding that they had used the chart during the assessment. Five students said that the discourse markers they had added to their orientating chart was the part they found most useful, while seven students commented that it was the order and structure which had been most helpful.

When asked what was missing from their charts and what they would like to include next time, students mostly commented on paragraph structure. Naruto said: 'how to start and end a

paragraph.' Bean said: 'a better way to structure paragraphs.' Gilph wrote: 'I would like to have extracts from the professional essay to give me examples.' There were some students who had not added discourse markers to their charts before the essay and three said they would add them before the next essay and two students wanted to have more sentence starters.

On reflection, I wondered whether it was the best decision on my part, to limit their choice of orientating chart and perhaps, in doing so, I undermined the individual metacognition of essay writing process and their ownership, since their own orientating chart was based on their own understanding of the essay writing process and not anyone else's. I think that limiting choice at this stage and considering that maybe some of the charts were better than others, might have negated their burgeoning understanding of the essay writing process, because I asked them to relinquish their own charts and chose another one.

Gal'perin writes 'the subsystem [on the orientating chart] of elucidations and prescriptions for the projected structure of an action is made complete enough so that the pupils…can correctly carry out the new assignment the very first time and every time thereafter.' (Gal'perin, P., 1989 (1974), p.70). This, therefore, would suggest, that the students did not have a full and complete orientating chart at this stage. In the response to the questionnaire, many students mentioned that they thought bits were missing. As part of the action research cycle this was a good result, as I was then able to adapt and change the plan for Stepwise Procedure Two and consider how I could work with the students to make the orientating chart more comprehensive and complete.

My colleague, Penelope, read and assessed the baseline and SWP 1 essays of two students using the essay criteria assessment tool (refer to figure 26). This indicated a validation of my own assessment and the students' progress.

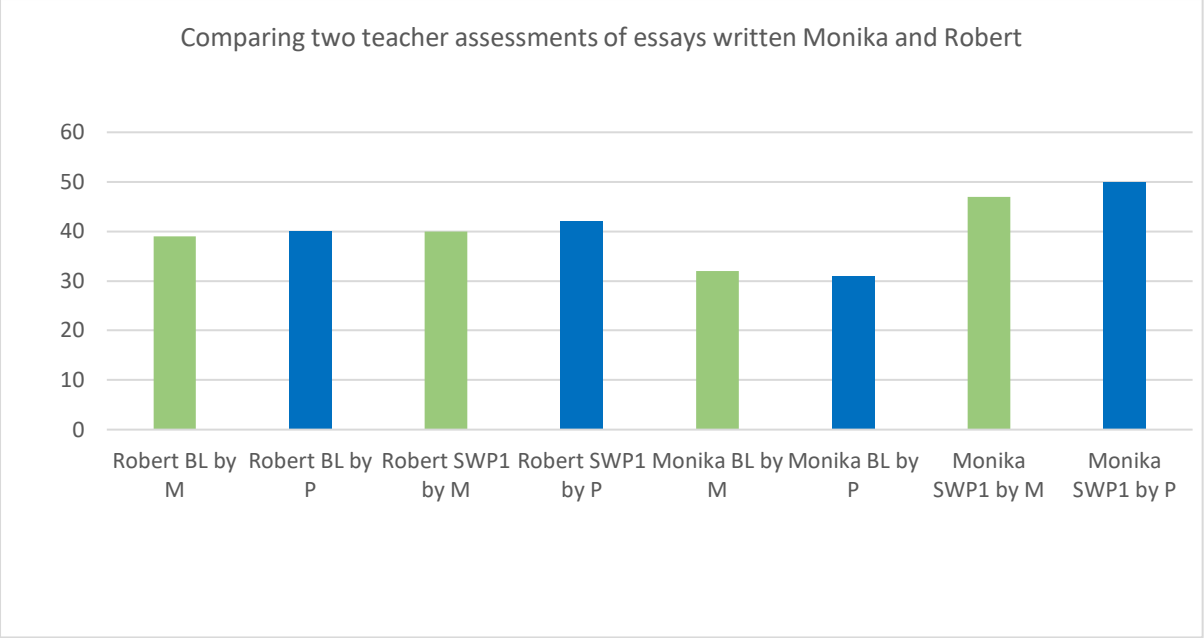


Figure 40: Comparison of the difference in assessment by myself and Penelope using the Essay Criteria Assessment Tool when assessing the Baseline and SWP1 essays of Monika and Robert

Penelope assessed essays written by Monika and Robert, and I compared her assessment to my own. (Refer to figure 40 above). Penelope used the same Essay Criterion Assessment Tool, but did not comment on any attempted criteria, she only ticked what had been done within the essay, thus, producing a slightly different result. She did, however, do it blind with no knowledge of my own assessment or which students had written them. She had assessed Monika's work as significantly better in SWP1 compared to her baseline essay, whereas Robert's essays looked 'pretty similar'. This suggested a validation of my essay assessments and my general results highlighting the improvements in Monika's essays and lack of improvement in Robert's essays. Penelope's assessment reinforced how Gal'perin's Stepwise Procedure was supporting some students' essay writing development and beginning to answer one of my research questions.

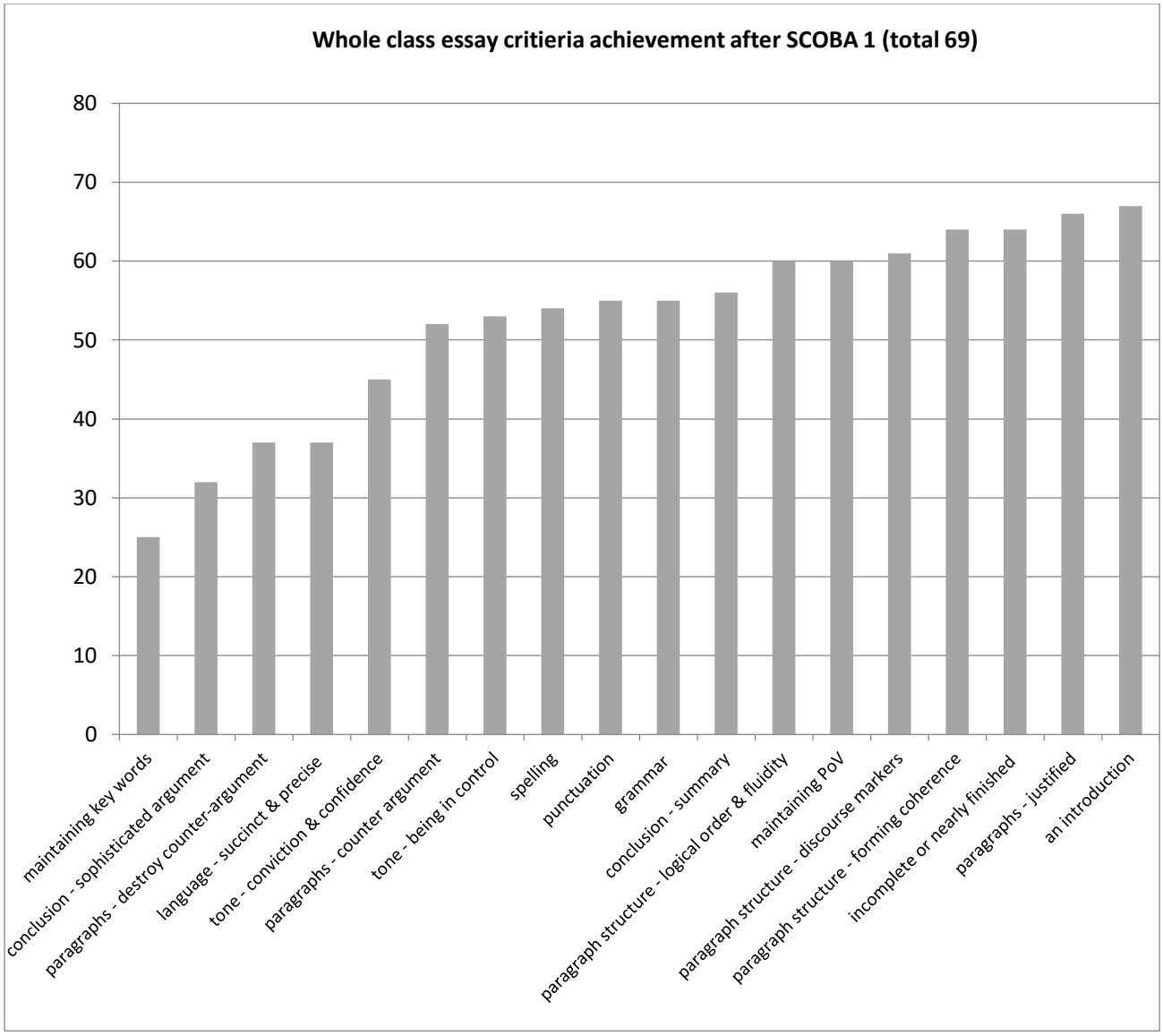


Figure 41: Essay Skills of the whole class after SWP1

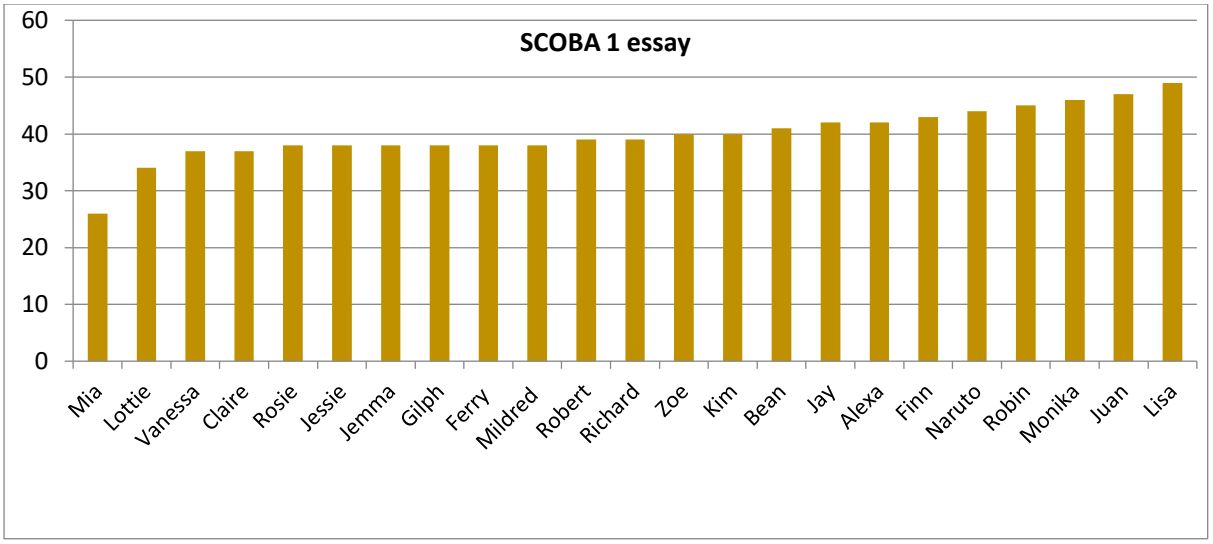


Figure 42: Individual student achievement after SWP1 essay

Areas for improvement		
Name	Topic	Time needed
Lottie	How to start an essay	5 mins
Claire	Last paragraph: repeating and adding, reassuring from previous paragraph	
Mia	More about the central part of the essay	
Bean	More on starting an essay	
Richard	Have more points on the argument	
Claire	Work on persuasion and argument	
Vanessa	Central paragraphs, good sentence starters, use of quotes, attack the issue	
Naruto	PEE	A couple of lessons
Finn	Explaining how to argue against and attack opinions	5 mins
Alexa	Learn how to cherry pick ideas without giving them to the argument	
Mildred	Explain persuasion not manipulation	5 mins
	More time on PEE	
	Sentence structures and conclusions	
Robert	Practise writing some of the points so I know exactly what to do	
Monika	How to conclude an essay	10 mins
Robin	Using own experiences to get the point across	
Juan	I don't think we need to learn anything else, just let's do some more fun, interactive and entertaining stuff.	

Gilph	How to write and what to include in introductions and opening paragraphs.	A lesson
Gilph	How to structure an essay	Some time
	Discourse markers	
Ferry	Conclusion	
	Using personal experience	

Figure 43: Students identify areas for improvement.

The evaluation process of SWP1 involved the students and me, reflecting upon the skills achievements and identifying areas for improvement (refer to Figures 41 and 42 and 43 above). The students reflected on their own work using the Essay Criteria Assessment Tool and their previously identified, that is after the baseline essay, areas needed for improvement (refer to figure 43 above). In addition, I explained to them that I had analysed their work in graph form so that I could understand how much progress they were making. I explained my formula and allowed them to calculate their own mark out of 54. I did not show the graph, figure 42, as I did not want to create any form of leader board, but I wanted them to be aware of how many points they could score to meet all criteria, which is why I showed them the graph in figure 41. Some students mentioned that they found this process helpful for their understanding of the writing process and what else they needed to achieve. This comparison of their competence at the different elements of argument essay writing enabled the students to easily identify areas for improvement, thus providing specific focus for the materialised stage of SWP 2.

This process demonstrated the importance of the students not only understanding the outcome, as in the expert essay, but understanding the means of the action necessary to complete that outcome. By reflecting on the task and assessing their own work against the Essay Criteria Assessment Tool the students appeared more motivated to identify the specific areas needed for improvement. The students became 'involved in the process of assessing their own education… [giving] … rise to new educational-cognitive motives and promoting an interest in the content techniques and the process of learning.' (Markova, 1990, p.281) The assessing of their own work proved an important part of their developing meta-cognition of essay writing.

At the end of this cycle of data collection, some progress was seen in the students' essay writing ability. It was beginning to show how Gal'perin's Theory of Systematic formation of actions and concepts and his Stepwise Procedure, including the SCOBA and orientating chart, was enabling some students to develop their essay writing skills. But this was far from conclusive as some students had not made progress and in fact regressed. I discuss this in more detail in Kim's case study section 4.3.2.

4.2.2 Stepwise Procedure Two

Motivation for SWP Two came primarily from the evaluation of their SWP1 essays, their progress against the criteria and the orientating chart. In considering reasons to write a better argument essay, students talked about getting grades for GCSEs, A levels and university. Juan spoke about the importance of defending yourself or others in law or in the workplace. Juan told me that he hoped to become a lawyer one day. Most agreed that it was important to develop their skills of argument and essay form. Some were pleased that they had already made progress from the baseline to SWP1 and wanted to make more, while others wanted to improve so that they did not have a negative profile of improvement. However, there were still students who, on the evaluation questionnaire, had commented that the writing process was 'difficult', Naruto, and 'challenging', Lisa.

The evaluation of SWP1, as explained above, revealed several areas which needed development and improvement. Thus, five elements were deemed necessary to focus on in SWP2 materialised stage:

- maintaining POV – key words
- conclusion – sophisticated argument
- paragraphs destroy counter argument – bias
- language – succinct and precise
- develops a confident and convincing tone

The five elements listed above, showed gaps in the students' knowledge which needed to be filled during the materialised stage of SWP2. Gal'perin's materialised stage is aimed at enabling hands on experience of manipulating these specific elements. The element 'maintaining point of view' was added to this list at the request of the students because although my analysis suggested they were adept at it, the students felt otherwise.

4.2.2.1 Stepwise Procedure Two: Materialised stage

The materialised stage of SWP2 focused on an expert essay abridged from an article originally written in *The Guardian* by Phil McDuff 06-02-17: '*Donald Trump: not mad but merely the arrogant boss we've all seen before.*' (Refer to The Appendices section 8.2.2) After identifying the counter

argument within the expert essay, students developed confidence by using it as a template to develop their own within an essay, 'Homework is a threat to students' freedom'. Below is an example of Monika's work compared to the original expert essay.

Counterargument is destroyed – taken from Phil McDuff abridged essay.	Counter argument is destroyed – taken from Monika's practice essay.
'Armchair psychiatrists take to every media outlet to inform us that he's [Trump's] a madman and dangerously unhinged. However, this easy mantra is unhelpful. I don't deny that the Trump phenomenon is worse than previous presidential administrations, but it is recognisable; it is not insane.'	'Some people might say that homework is beneficial, and it is preparing us for later work. However, this is an easy mantra. I don't deny that students need to prepare for lessons to develop their learning, but how will they have the will or the energy to complete work at school if they spent all of their free time completing work at home. Students would have much more energy and would be happier if only they had time to rest, play and socialise after a long day at school.'

Figure 44: Chart showing a student's attempt at a paragraph from the expert essay.

Obviously, this was only a practice paragraph, copying the style from the template and written out of context, but it appeared successful as it showed that Monika, was developing confidence and style (refer to figure 44 above). Using a template for a scaffold in this instance, allowed the students to fulfil the means and the objects of the action; the students see the means and objects of the action as a kind of formula that they can use and develop for their purposes. '[to]know how to solve similar and related problems and this paves the way for transfer to other knowledge domains involving similar class of objects [essays].' (Haenen, 1996, p.154) The use of the scaffold here, was not just imposed by the teacher, the students had identified this counter argument paragraph and discussed it in groups. They then dissected it and identified the key words used within the paragraph to show the turn of the argument. By utilising student discovery in this way, with the teacher as a guide, facilitated confidence and understanding of the complex nature of developing a counter argument.

Using a template to support the writing of counter argument had proved successful, but to support students to develop a confident tone and succinct language I drew on work done in Mulberry School for Girls in London. Their teaching and learning project was based on research

by Martin and Rose and Halliday. Martin and Rose, focused on scaffolding literacy in the classroom (Martin and Rose, 2015) and Halliday's work on language development and semiotics (Halliday, 1993). These researchers point to the need to develop a common language with which teachers speak and teach meta-language and semantic patterns enabling students to access the educated discourse needed for their stage of education. Mulberry School for Girls called this Academic Writing. The focus is on the use of modal verbs, modifiers and active verbs as a way of creating an educated discourse of analysis. This academic language strategy proved successful in helping students to develop a more sophisticated tone. (Refer to figure 22) Also refer to the case studies section 4.3 for more details.

Another element that was focused on in the materialised stage of SWP2 was writing a sophisticated argument within the conclusion. Using the conclusions from the three essays, detailed in The Methodology Chapter section 3.3.3, students identified key points to include in their conclusions: making clear your Point of view; reiterating opening paragraph; repeating key words; use of discourse markers; suggest far reaching consequences; use rule of three and refer to a kind of spiritual truth.

The hands on action of writing a conclusion was done in response to the essay by Jules Howard entitled: 'Zoos shouldn't be jails.' The students were very engaged by this article and enjoyed writing conclusions. This process proved very successful to enable students to develop their skills in writing conclusions. Mildred made some good progress in this area, refer to figure 45 below.

Mildred's Baseline essay conclusion	'In conclusion, I think that teenagers should be aloud a job. However it shouldn't be long hours neither a hard job. Also they shouldn't run during school time or late at night. If the children keep this in mind then it shouldn't effect their school work. Although if they work for long hours, all night and have school the next day, then that shouldn't be aloud at all.
Mildred's practice conclusion in the Materialised stage with annotations from Mia in square brackets.	'To conclude, people want to see animals alive not suffering or dead. *[opposing*] They want to see them happy, free and far from suffering. In order for this to happen, zoos need to change. However *[discourse marker*] , some animals are better off in the wild, they are happier and free. Although *[discourse marker]* zoos are not all bad, *[counter argument]* they put a smile on people's faces, especially children. But would children still be happy if they found out these animals were dying just for a glimpse of joy in *[consequence for the future]* their day?'

Mildred's conclusion in SWP2	In conclusion, Zoos are not a very nice habitat or environment for animals. The impression people are getting from zoos is that zoo owners want money, they don't care that they have made animals feel like they are locked up in a prison cell or that the animals are stressed.

Figure 45: Conclusions written by Mildred, showing her progression over the data collection period

In her baseline essay conclusion, Mildred was not focused on her point of view and each sentence made a separate point. Despite using some discourse markers, they are not used appropriately or effectively. Mildred's practice conclusion, after the Materialised stage, displays much more cohesion and structured thinking. Both Mildred, and Mia who annotated after the conclusion had been written, show a clear understanding of discourse markers, despite Mia only indicating two, Mildred has managed to include four discourse markers. She has repeated key words 'suffering', 'happy' and 'free'. Mildred has referred to a kind of spiritual truth in the last sentence and her point of view seems very clear. This conclusion was far more sophisticated and focused than her conclusion in her baseline essay. Mildred's SWP2 conclusion was less sophisticated than when she was using the template for conclusions, but still exhibited improvements compared to her baseline conclusion. She focused and expanded upon her main point of view and used a metaphor to emphasise it. Her vocabulary was more sophisticated shown through her use of words such as 'environment', 'habitat' and 'impression' and she hadn't used discourse markers inappropriately. This highlights the success of using expert essays to develop language and understanding of the essay writing process and the importance of the Materialised Stage in developing confidence in the actions and means of the actions.

4.2.2.2 Stepwise Procedure Two: Orientating Chart

As mentioned at the end of SWP 1, the orientating charts used in SWP1 were not as complete as Gal'perin would have advocated and the students had made errors and found that many elements or useful points were missing from these charts, *refer to the section on SWP1.* Haenen commented that any orientating chart that allowed 'avoidable errors' was 'unstable', Incomplete Scheme of Orientating Basis. (Haenen, 1996, p.153)

Orientating Chart for SWP 2 Name: _____			
Paragraph	Elements to include	Suitable vocabulary	Sentence starters
Introduction			

Development paragraph			
Personal experience paragraph			
Development paragraph			
Counter argument paragraph			
Development paragraph			
Development paragraph [maybe add]			
Conclusion			

Figure 46: Blank Orientating Chart template, created by me

Thus, I created one template incorporating most of the ideas and structure created by the students own Orientating charts (refer to figure 46 above). Initially I wanted to see if this chart, which I perceived to be a clearer style, would be more successful in enabling the students to write an essay in the style of an expert. Furthermore, I wanted to ensure that they included more detail and, be more 'complete'. (Haenen, 1996, p.153). The students firstly, tried to fill this chart on their own, and then in the Overt Speech Stage they worked on the chart in groups of four or five. Doing this procedure twice, that is creating the orientating chart, once independently and once collaboratively proved a good way of developing meta-cognitive understanding of the essay writing process and demonstrated their growing understanding and use of educated discourse of essay writing. It was a kind of reflective process and according to Markova '[giving] … rise to new educational-cognitive motives and promoting an interest in the content techniques and the process of learning.' (Markova, 1990, p.281)

Using the template to stimulate the Overt Speech Stage worked well. Students had to use educated discourse to discuss the various elements of the essay and all the students demonstrated an understanding of these elements. Below are some portions of the conversation in the group led by Naruto, involving Mia, who was a student showing little improvement after SWP1.

Naruto: 'What did you put Mia?'

Mia: 'I put give examples and give facts'

Naruto: 'What else did you put for vocab?'

Mia: 'Varied connectives'

Mia: 'I put for sentence starters – other people might think … and I don't think'

Mia: 'What about sentence starters?'

Naruto: 'I already said that … if you were listening …'

Mia: 'I did… however'

Naruto: 'And the last one – rule of three …what are you putting there, Mia?'

Mia: 'I didn't put anything for conclusion'

Naruto: 'Well, you're not very good at that are you, we did a whole lesson on that!'

Mia: 'Well, I've got … lastly' [laughter]

In these portions of conversation, Mia shows she can use educated discourse of essay writing and shows some interest in developing her understanding by asking a question about one of the elements. Mia's essay achievement rose from 26 points after SWP1 to 46 points after SWP2. This evidence underlines how Gal'perin's SWP used during my data collection period made a significant difference in the way Mia wrote her essay, could use educated discourse in conversation with peers and enabled her to make good progress.

Despite the work in groups being considered, by the students, as the least beneficial stage of Gal'perin's Stepwise Procedure (refer to figure 25 at the start of this chapter), there were some students who considered it excellent or good at helping them to improve their understanding. Only Juan gave it 5/5 and the following students gave it 4/5: Kim, Lisa, Mildred, Lottie and Robert. Mia, whose conversation I have referred to above, only gave it 1/5, and yet appears to have benefitted despite her own evaluation of group work.

When comparing the students who felt they benefitted from the Overt speech stage we see some disparity in their engagement. For example, Lisa's active and often leadership role in the group discussion demonstrates 'an interest in the content techniques and the process of learning.' (Markova, 1990, p.281). Lisa asks key questions, 'what do we want ?' and later in this section justifies her decision explaining it to the other students in her group.

> Lisa: 'Think of a reason to back up a bad point. Compare the good points of each side of the argument. And give examples of how your idea would work.'
>
> Monika: 'Yeah, so, umm, so back up … back up the … what?'
>
> Lisa: 'Bad point'
>
> Zoe: 'That can't be bad point?'
>
> Lisa: 'Yeah, if there's like the weak parts of your argument, you think of a reason to back them up'

Lisa's involvement in the discussion and explanation of what she has used shows her meta-cognition of the essay writing process.

In the same way Robert displays a similar meta-cognition during the group discussion:

> Ferry: '[in the second development paragraph] reiterate personal experience'
>
> Claire: 'Yeah, but you done that in the first development paragraph'
>
> Ferry: 'So you can do it again'
>
> Robert: 'No, that's like kind of conclusion, use statistics [instead]'

Here Robert corrects an idea explaining to the group the reasons for not including that idea and gives a solution to the problem.

However, Mildred does not display this level of meta-cognition. During her group's recording Mildred leads the talk. The recording itself is much shorter than any of the other groups, being 3.30 minutes. The groups were allocated 25 minutes and the others used between 20 and 23 of those minutes in recording. This results in Mildred's group merely recording words they have written into the various blanks of the template.

> Mildred: 'For sentence starters … you need to use facts, evidently, often, for instance, undoubtedly, in my experience'
>
> Mildred: 'For the counter argument paragraph you need to cherry pick good ideas, use quotes and discourse markers, personal experience, you show up sides to the opponent's

argument and prove why yours are better, and sentence starters you can use are: alternatively, on the other hand, apart from and like … use repetition of ideas in the counter argument paragraph.'

Here Mildred is using educated discourse of essay writing but does not reveal any meta-cognition of the words she is using. The group do not have any discussion as to what might be best in each section nor do they try to justify their points. In her post data collection questionnaire Mildred identified the orientating chart as the most helpful aspect of Gal'perin's Stepwise Procedure.

Complete Orientating Chart for SCOBA 2 15-03-17			
Paragraph	**Elements to include**	**Suitable vocabulary**	**Sentence starters**
Introduction	Set in time and place Refer to history Introduce opinion	certainly indeed essentially	Today in 2017… For many years people believed…
Development paragraph	Build your POV with Statistics Facts Rhetorical question (x1)	demonstrates signifies exemplifies	Significantly… Not only does this suggest…it also implies Primarily
Personal experience paragraph	Personal story – or friend or relative Explain consequence Compare with issue	Emotive language for instance for example notably exhibits	In particular, my personal experience with… Even though this creates a…there is also…
Development paragraph	Comparative example: famous people or literature character Emphasis Explain how and why your POV works	evidently undoubtedly in fact	This example demonstrates… Furthermore… In a recent survey… Perhaps this could explain…
Counter argument paragraph	An opposing POV Dismiss it as insubstantial	however, alternatively whereas apart from	Some people might think… However, this is an easy mantra… I don't deny that…but…
Development paragraph	Facts that audience can relate to Expert opinion or quote Justify your PoV	In a sense Highlights Indicates exaggerates	Nevertheless, this is… Although some have… Moreover, the evidence here… Clearly this proves…
Development paragraph [maybe add]	Weak spots in opposing argument Extra point of persuasion Rhetorical question	portrays emphasizes supports argues	Above all… Despite some…. It is obvious that…

		consequently	
Conclusion	Repeat argument referring back to the first paragraph Mention opposing opinion Rule of three Consequences for the future	certainly subsequently underlines reinforces clarifies	Finally Therefore In conclusion I strongly disagree

Figure 47: Stepwise Procedure 2 Orientating chart, amalgamated from notes written by the student groups during the Overt Speech stage

Once the students had completed their charts in groups, I then amalgamated all their observations from the work they had done in the Covert and Overt speech stages and created a new, or class, orientating chart with included all the elements they had identified. (Refer to figure 47 above). I coloured the three different elements and greyed out paragraphs which could be omitted if they were short of time during the allocated essay writing period. I allowed all students to use this class chart for their essay writing in SWP2 if they wanted.

During the writing of SWP2 essay, one student asked for his large white orientating chart, which he had put together himself. He wanted to use that alongside the new one. Two other students Jessie and Monika pulled their SWP 1 orientating chart out of their books too. I noticed one student reviewing one of the zoo essays we had read.

4.2.2.3 Evaluation of Stepwise Procedure Two

My analysis and evaluation of the students essays at the end of SWP2 indicated that all the students apart from Lisa made progress in their essay achievement from SWP1 to SWP2.

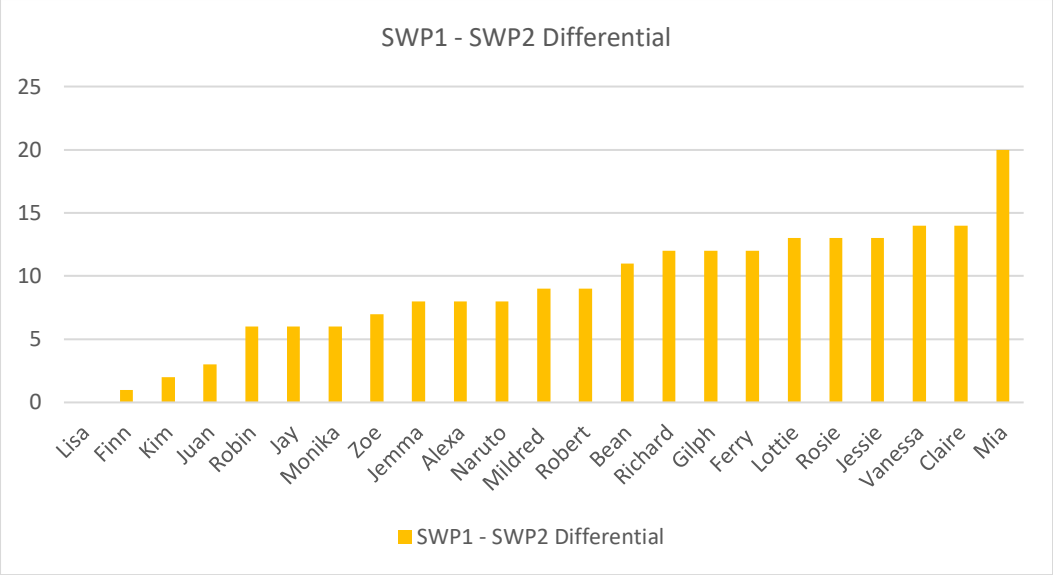


Figure 48: Bar chart showing the differential in achievements between SWP1 and SWP2. This highlights those students who have made the most progress since SWP1.

Lisa had made 10 points of progress from her baseline essay to her SWP1 but did not make any more progress between her SWP1 and SWP2 (refer to figure 48 above). This appears contrary to her group participation and use of educated discourse in the Overt Speech Stage.

The five students who had made little or negative progress from the Baseline to SWP1 all made good progress this time. Mia improved by 20 points, Vanessa and Claire by 14 points, Lottie by 13 points and Mildred by 9 points. For these students, the use of the orientating chart template helped them write a better essay, along with the repeated Stepwise procedure which established conventions and developed their confidence and understanding of the various elements within the essay writing process.

On the post SWP2 questionnaire, nine out of the twenty-three students responded that they were very happy with this Orientating Chart and would not want to change it. However, eleven students did want to change the chart in some way. It was not the template or the format of the template that most of the students wanted to change but the detail included on the template. Nine of these students wanted to add more vocabulary to the chart. Mia stated that she would: 'add interesting vocabulary to help me write a sophisticated essay.' Others wrote that they wanted: 'key words' Jessie; 'suitable vocab' Lottie; 'a list of discourse markers' Jay.

There were two students, however, who did want to change or alter the template of the orientating chart: Gilph, and Vanessa. Vanessa wrote: '[I would]stick the Orientating chart that Miss gave us onto the Orientating chart that we did ourselves.' She indicated through this comment that she wanted to use her original self-made chart. Even though she hadn't made so much progress in SWP1 as she had in SWP2, Vanessa still felt that her own self-made chart included more detail and was perhaps easier to navigate. This also underlines my suggestion earlier that the students needed their own orientating chart to develop the metacognition of what they were doing. It is not merely enough to give the students an orientating chart for writing, even if it includes a lot of the detail, it is the process of being involved in making the chart, and for Vanessa, designing the chart, that gives more confidence in the writing process. Gilph also wanted to alter the template chart. He wrote: 'I would add more about what to include and make it more detailed.' Gilph's original chart was the most complicated and terrifying to look at (refer to figure 36 in section 4.2.1). Despite believing that all the necessary detail was included on the template orientating chart, since I had populated with the students' own comments, Gilph wanted something more. This emphasises the importance of the involvement of the student in the creation of the orientating chart and how it facilitates students' meta-cognition of the essay writing process.

Gal'perin, would probably agree with Gilph and Vanessa, the chart needed more detail, Gal'perin described the card as an 'algorithm, which delimits the principle sections and gives successive indications of the smaller sections that are part of each section of the action … a very difficult [and] complex system' (Gal'perin, P., 1989 (1974), p.70). Indeed, over half of the students wanted to add things to the chart, showing that for many of the students their orientating chart was still only an ISOBA rather than a complete SCOBA.

Gal'perin always focused on the importance of having the students collaborate in the designing of the orientating chart. The process of how to achieve the outcome becomes clearer to the student as they develop the orientating chart with a mediator, so that it becomes a 'cognitive map for an orientating basis.' (Haenen, 1996, p.134). In SWP2 the students had populated the orientating chart template with their own detail, but then I had amalgamated that detail, ensuring all students had the same detail and that no student would be disadvantaged if they had not completed the whole chart with detail. The orientating chart was now, in many ways, my chart, the teacher's chart; it included what I deemed necessary, even though I had used the students' ideas. In taking away their own chart and giving them an amalgamated one, I had taken control of their creations. Although for some students it proved successful perhaps it was the materialised stage which had had more impact on the students' meta-cognition of the essay writing process. Gal'perin

emphasised how the Orientating Stage and the Materialized stage need to be demonstrated physically at a slow pace and in 'so much detail that it becomes clear to the learner how the operations involved are connected to changes in the material' (Haenen, 1996, p.134)

Students were generally more successful in SWP2 than in SWP1. Nine students were positive about how the orientating chart had helped them to structure the essay in a better manner. Two students commented on their counter argument paragraphs. Claire wrote: 'I was pleased about my counter argument because it is something I haven't done before.' Lisa also wrote: 'How I can now write a good counter argument paragraph.' A few students commented on the use of language. Robin: 'I think it sounded sophisticated.' Vanessa: 'I was pleased with my use of discourse markers and other elements.' In addition, Mildred and Ferry commented that they felt much better about their introductions.

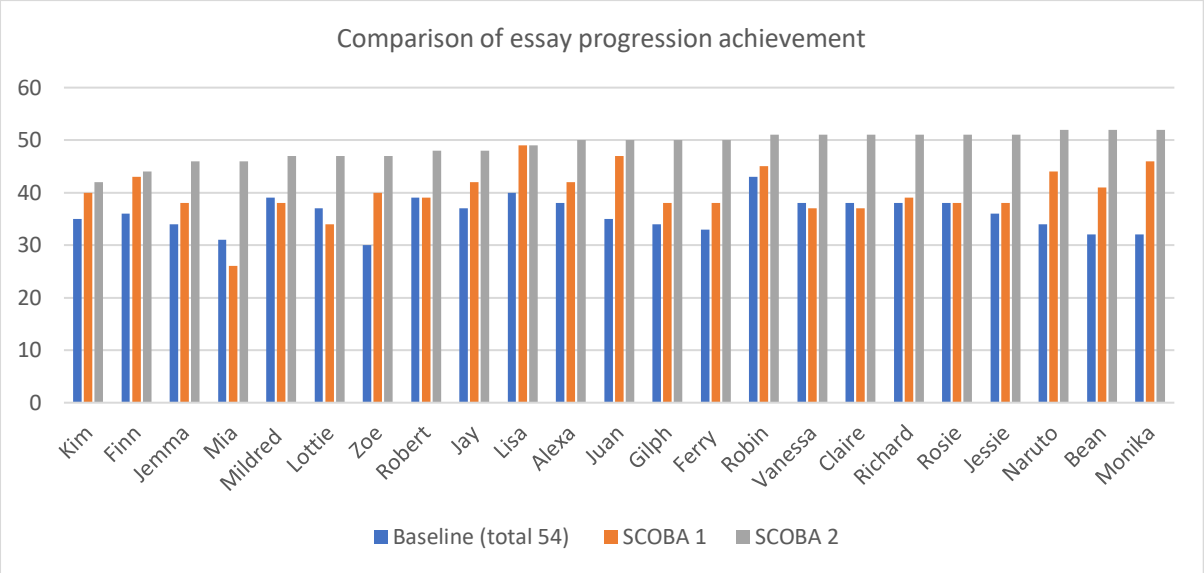


Figure 49: Graph showing the students' progress in essay writing comparing Baseline, SWP 1 and SWP 2

Figure 49 above, shows the progress of each student from their baseline essay to their SWP 2 essay. Clearly showing that each student had made progress in their essay writing ability through the use of Gal'perin's Stepwise Procedure. This suggests that the use of the expert essays, the materialised stage of hands on manipulation and the restructuring of their orientating charts helped many make more progress. Gal'perin believed that his Stepwise Procedure reduced total learning time because it eliminated the 'laborious period of formation and genesis of the basic structure of actions and concepts'.(Gal'perin, P., 1989 (1974), p.71) However, he cautioned that

the 'first assignments using the new SCOBA are carried out much more slowly.' Despite my concern about the completeness of the orientating chart, students' essay writing did improve.

The next section of the Findings chapter contains three case studies. This explores three students; their essay writing progression, their meta-cognition of that process and their educated discourse related to that process. I describe in a lot more detail what happened to their essay writing and educated discourse, and this is helpful for understanding the impact of using Gal'perin's Stepwise Procedure in a year 9 classroom.

4.3 CASE STUDIES

This section of my findings explores three students and their progress during the data collection period. By using case studies, I am able to examine in more detail how Gal'perin's Theory of Systematic formation of actions and concepts and his Stepwise Procedure, including the SCOBA and orientating chart, impacted upon these three students in both their essay writing skills and their educated discourse.

I chose three students whom I felt represented the group. I chose Monika who was the top progressing student. In direct comparison to her, I chose Kim who was one of the students who had made negative progress after SWP1. And then I randomly picked Claire, a student who remained average within the group. I hoped these choices would allow me to make some generalisations about how students reacted, responded, and progressed using Gal'perin's Stepwise Procedure in the classroom. The three case studies enabled me to make an 'examination of the extent to which the programme's stated objectives [ensuring automation of essay writing and development of educated discourse] had been achieved'(Bassey, 1999, p.63). In addition, the case studies enabled me to 'explore significant features'(Bassey, 1999, p.58) particularly dialogic development of language and the relationship between their developing educated discourse and their developing essay writing skills.

4.3.1 Case Study One: Claire

4.3.1.1.1 Background

Claire was a white British female with a July birthday, not categorised as Pupil Premium, or SEN or EAL. She lived with both parents in the town where the school was located. She had an older sister, who had attended the school, while Claire was in Year 7 and Year 8. In Year 7 Claire's reading age was tested using the: WRAT 4 – Wide Range Achievement Test. This test had assessed her to have a reading age of 14; that is three years above her school year, showing that she had an above average reading age.

During the time Claire was in year 7 and year 8, the school used two types of assessment when generating reports. Each student for 'Attitude Towards Learning' – ATL and 'General Progress towards end grade target' - GP. The end grade target – EGT, was calculated according to their Year 6 SAT results. However, Claire did not have a Year 6 SAT result, as she had been absent. Therefore her EGT was calucated according to her WRAT 4 Test. Her EGT was projected as Higher, which at that time meant that: A*, A or B grade was expected at the end of her KS4 GCSE results.

Both the GP and the ATL were assessed on a four point scale:

- 1 = Excellent
- 2 = Good
- 3 = Inconsistent
- 4 = Inadequate

The assessment system was only reported for the first five terms of the year, that is term 6 was not reported. I did not record grades for all Claire's subjects, I only recorded grades for History and English.

Claire's ATL, for year 7 and year 8, was consistently graded 1, in both subjects, apart from term 2 in year 7 English, she dropped to a grade 2. Claire's GP was consistently graded at 2, apart from year 8, terms 4 and 5, in History, where she improved to a grade 1. These grades show that Claire was making consitently good progress in English and in History excellent progress towards her target grade and she maintained an excellent ATL in both subjects.

In the post-baseline questionnaire, Claire reported that she had been, 'Happy to do it [write the essay]' without a scaffold, although she would normally expect a teacher to give a specific lesson about how to write the essay and to give the students a scaffold to support the writing process.

Claire reported to have written three essays, in the past two years at the school, in English and History lessons. Neither the type nor the length of essay was quantified.

The first sound bite I recorded was two days before writing the baseline essay. Claire worked with two other students, Jay and Jemma. She, and her peers, were vague about the essay elements and process.

> Claire: 'An essay is a long answer to a question that is usually descriptive.'
>
> Jay: 'It sometimes needs to be a certain amount of words or paragraphs … you would write an essay to try and describe something with more detail.'

There was no determinable comment from Jemma. These three students have some idea that an essay needs to be 'long' with a certain word length or paragraph length, but this is not quantified. They understand an essay includes 'detail' but fail to qualify the type of detail needed. They use the words 'describe' and 'descriptive' showing their lack of educated discourse of essay writing. The use of the word 'descriptive' is often used by students, in my experience, to mean some extra detail, for example that of an adjective which creates more detail for the noun. But these students are unable to find the appropriate words to explain what an essay might entail. This is surprising as Claire stated that she had written up to three essays in the past two years of secondary school life.

Mercer's research explains that students habitually use a colloquial and chatty style of talk and find not only 'educational discourse' tricky to handle, but are frequently 'unable' to use 'educated discourse' (Mercer, N., 1995, p.80). I hoped over the next few months, by using Gal'perin's Stepwise Procedure for essay writing, that Claire, and the rest of the students, would develop an educated discourse for essay writing, and that this would be seen in their talk as they became more aware of their learning process, or metacognition.

4.3.1.1.2 Baseline essay

The baseline essay, as previously mentioned was entitled:

"Children of school age should not be working at all. They should be focused on their schoolwork and helpful to their parents. Working for money comes later." The councillor will take part in a debate at your school. Write a speech in which you argue your point of view in response of this statement.

Despite being a rather cumbersome essay title and, as I have commented before, Claire felt that she had done well in her essay writing process. She commented in the post-baseline

questionnaire: 'I managed well and did better than I thought I would. I planned out in my head a small idea on what I was going to do.' When asked what resources she had used to help her writing, she named: 'Thesaurus, my own brain and past knowledge'.

Here is the text from Claire's first essay:

> 'Hello everybody, my name is Claire and today I'm here to discuss whether children should be at school or working.
>
> I am fully aware that many years ago families could not afford for their children to get the education they wanted which was very unfortunate because they could not read or write and they were stuck working for the rest of their lives.
>
> In today's world, there are millions of schools everywhere for children at the young age of 3 to the age of 16 or 18. They teach you different techniques of learning and subjects like; maths, English, science, history, geography, and many more. Only boarding or private schools cost money, but for a completely average school, education is free. It doesn't matter how much money your family has.
>
> The working ages is normally 18, yes, you can get a small weekend jobs from the age 14-15 but that is usually for pocket money. There are so many jobs to choose from. Beauty, engineering, doctor, anything you can name, there is a job for it.
>
> After going to school and finishing at the age of 16 there is a big future ahead of you. After school you get the chance of going to a college and to study on something you want to do when your older. You stay in college for about 2 years and then, there you are stepping into the big scary world and you probably most certainly are going to have a big rollercoaster ride ahead of you.
>
> Some people would probably think, why can't my kid just skip school and get a job and earn money and start a future early? Well you see, people have the choice, if they want their child to do that or not. Personally I think the best decision is to stay in school until you are ready.
>
> As I have already mentioned, children years ago had to work, mining, working in chimneys, many kinds of jobs that were dangerous and many children did end up dying from the terrible working conditions.
>
> So in conclusion, I myself thinks children should be getting an education they want and should be waiting for their future to start when they are 18. Yes, it would be good if

children could work for good money for themselves or their family but in my case education comes first.'

In assessing Claire's essay, I used the 'Essay Criteria Assessment Tool', refer to figure 11. My assessment of her essay writing indicated that Claire was able to implement several elements of the essay writing, such as: an introduction; logical and fluid paragraph structure; justifying her points in her paragraphs; writing a conclusion with summary; maintaining her Point of View (POV); and use of a plan. (Refer to Appendix 8.6.2) Although she had attempted some of the other elements, there were four elements that she had not addressed: destroying the counterargument; writing a sophisticated conclusion; using succinct and precise language; maintaining key words. My assessment showed she had better understanding of how an essay should be written in comparison to some of the other students in the class.

In the time available, 50 minutes, Claire wrote eight short paragraphs. Her introduction was appropriate for the task:

'Hello everybody, my name is Claire and today I'm here to discuss whether children should be at school or working.'

She started each paragraph with a different sentence type, for example: 'I am fully aware'; 'In today's world'; 'The working ages is normally 18'; 'After going to school'. However, Claire did not use sophisticated discourse markers to help the flow of her essay, she only used basic connectives: 'because', 'but', 'then', 'after', 'as', 'so'. In addition, Claire's chosen perspective was inappropriate for the audience, she chose the direct address: 'you' but within sentences that were directed towards other students: ' Yes, you can get a small weekend job'. In general, her essay was underdeveloped shown by her paragraph structure where, two paragraphs, including the introduction, contained one sentence, the other paragraphs contained two, three and four sentences. The language she utilised was average, according to my experience in secondary school, for a year 9 student, and did not reveal any extended vocabulary expected of someone with a reading age of 14. Language included words such as: 'unfortunate', 'techniques', 'normally', 'probably' and 'certainly'. These last three words were included in one sentence giving a conflicted tautology of meaning: 'you probably most certainly are going to have a big rollercoaster ride ahead of you'.

When I returned the essays to the students, I included the ECAT with my marks on it. I asked each student to read through their own essay and the Essay criteria assessment tool and consider how

they could improve their own work. Claire wrote: 'I could improve by adding more punctuation and grammar. I needed to have more paragraphs and have more control of the order of my essay.' It is interesting to note that she fails to mention anything about the four elements in which she scored no marks, instead she chooses to comment on two elements she attempted: punctuation and grammar and 'order of her essay' or 'paragraphs in logical order', for which I had given her a top mark. Again, this seems to reinforce the lack meta-cognition of the essay writing process. At this stage, baseline stage, these results are in line with my assumptions that the students had little understanding of essay writing.

4.3.1.1.3 Stepwise Procedure One

At the beginning of the Stepwise procedure all the students were orientated with the essay in general through discussion and introduction to the expert essay. At different stages of the SWP 1, I took notes on comments students made. While deconstructing the essays I recorded that Claire had identified a number of different elements within the expert essay: 'Use of statistics and percentages. Explains point. Confident about facts and statistics. Discourse marker used within paragraph. Points are compared and irrelevant points are made too.' Claire is beginning to use some educated discourse to identified key elements of an argument essay.

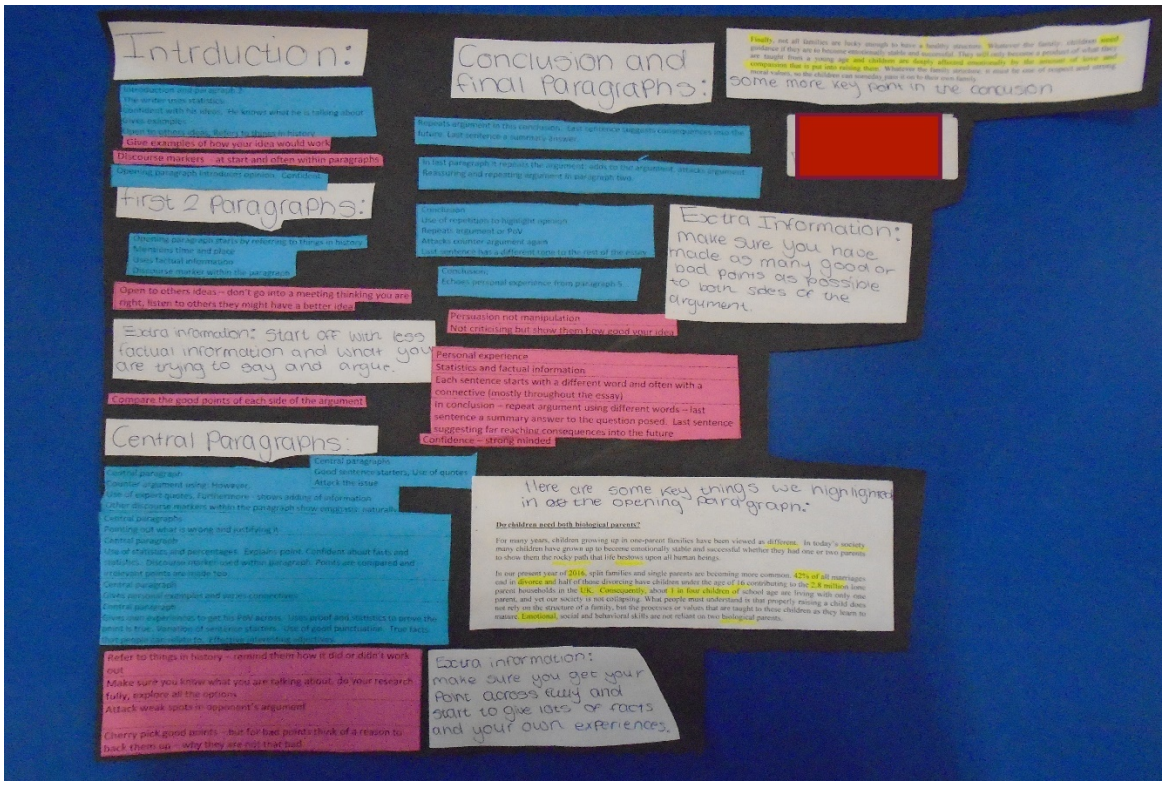


Figure 50: Claire and Mildred's Orientating Chart. SWP1.

When constructing her first orientating chart, Claire worked with Mildred (refer to figure 52 above). The chart is clearly separated into paragraphing sections, entitled: 'introduction', 'first 2 paragraphs', 'central paragraphs', 'conclusion and final paragraphs.' This supports Claire's point for improvement post-baseline essay that she wanted 'more control over the order of my essay'. Within each section the students have stuck on snippets of information from the two typed sheets that the class had collected. One sheet in pink, was collated before reading the expert essay and the other, in blue, was collated after reading the expert essay. Claire and Mildred have also stuck on the first two paragraphs of the expert essay and the conclusion. They also added three of their own notes about the essay writing process:

> 'Extra Information: start off with less factual information and what you are trying to say and argue'.
>
> 'Extra Information: Make sure you have made as many good or bad points as possible to both sides of the argument.'
>
> 'Extra information: Make sure you get your point across fully and start to give lots of facts and your own experiences.'

These comments denote a growing awareness of the essay writing process, although they are not yet using precise educated discourse. However, once asked to look at other people's orientating charts and chose an alternative one, that might be more complete, Claire chose Vanessa and Jessie's chart (refer to the Methodology Chapter section 3.3.2). When asked to comment on why she had chosen Vanessa and Jessie's chart, Claire wrote simply: 'V & J's chart would be very easy to work on and use'.

Here is Claire's SWP 1 essay:

> <u>Students who want to do practical jobs in the future should be allowed to start apprenticeships at the age of 14 years.</u>
>
> 'Firstly, children at the age of 12-3 usually become quite mature and start thinking about the jobs they want to do in the future. Although, children have to work hard and do their GCSEs, that includes, science, maths, English, history, geography, languages and many more!
>
> Therefore, how are children going to achieve the skills for their dream job if they are stick at school learning things you don't need to know. For example. Finding the nth term in a linear sequence. Do you need to know that to be a hairdresser or an electrical engineer?

Some people argue that all the subjects in school will help you in the future. But is that true?

In addition, what is better than starting an apprenticeship at the age of 14. Apprenticeships combine practical training in a job with study, you get to work alongside with experienced staff and gain job-specific skills.

Furthermore, getting an apprenticeship will mean you are entitled to a minimum wage pay of £3.40 an hour, this can get you a significant amount of money to finally buy stuff you want or to help out the family by chipping in some money to pay your phone bill every month. The normal working hours would be a minimum of 30 hours per week, you will also part take in the training of your apprenticeship which is usually one day per week.

Despite, not having the best grades you could wish for, an apprenticeship is just like having a real job, you can get a taste of what it's like to finally stat working and becoming an adult.

Above all, having an apprenticeship can boost your confidence and you can use skills that help you with your dream job, although people say you need education to get through life and get a good job, but you do learn the simple stuff you need to know from primary school to the middle of secondary school.

In conclusion, why shouldn't teenagers have a choice to start an apprenticeship at the age of 14. Everyone understands that children nowadays are massively spoilt, with x-boxes computer games iphones and expensive technology that is blocking their chance in learning and thinking about their future, so if you could start an apprenticeship at the age of 14 it would help teens focus on what education is really about.'

Claire's SWP1 essay showed she had made a concerted effort to develop and improve in many elements. According to my assessment using the 'Essay criteria assessment tool', Claire improved in three areas: paragraph structure linking ideas with discourse markers; paragraph structure – grouping ideas with coherence; and spelling. (Refer to Appendix 8.6.3) However, there were some areas in which she did not do as well as her baseline essay: introduction; conclusion – a summary; paragraphs – justified. Disappointingly, there was no improvement in the four elements that she had failed to address in her baseline essay: destroying the counterargument; writing a sophisticated conclusion; using succinct and precise language; including key words.

In the post SWP1 questionnaire, Claire reported being very pleased about: 'The evidence I have used and the structure of the essay'. Claire had not had a problem with logical essay structure during her baseline essay, but this structure was more coherent. There was evidence of her use of discourse markers: 'firstly', 'therefore', 'in addition', 'furthermore', 'despite', 'above all'. Claire also tried to use some evidence to support her opinions: 'Finding the nth term in a linear sequence'; although this example seemed to serve no purpose in the essay itself. Her perspective and audience awareness were generally improved, but Claire still used direct address at inappropriate times: 'how are children going to achieve the skills for their dream job if they are stuck at school learning things you don't need to know.'

After writing her essay and receiving feedback from me on the 'Essay criteria assessment tool'. All the students were asked to evaluate their performance and comment on how they could improve. Claire wrote:

> '[I need] facts to support my conclusion. I improved on my use of discourse markers. I didn't use my POV on both arguments enough. The orientating chart was very helpful during my essay but it could have had some extra stuff like, plan, how to argument on both sides without repeating ourselfs. ' [Claire's own words and phraseology]

These comments demonstrate a marked improvement in her educated discourse. Claire is now using words and phrases from the educated discourse of essay writing. When asked about the orientating chart, Claire commented that it had helped her and she 'worked well with it'; that the orientating chart had given her 'the way to order and structure the paragraphs'. Asked if she would like to change anything about the orientating chart, Claire wrote: 'There could have been some ways on how to add to your essay without repeating yourself', and 'I [would have] added discourse markers'. Claire contradicts herself to some degree, as she indicated that she had only used the orientating chart to a rate of 'some' and that she had actually used an information sheet about apprentices more than her orientating chart.

Galperin's Stepwise Procedure is indeed helping Claire to develop and improve the structure her essay. It is obvious that Claire has not yet produced an essay of expert level, and thus the orientating Stage of the SWP was incomplete, or as Gal'perin called it: an ISCOBA. The methods used within the classroom were 'unstable, errors [were] unavoidable and success in the learning will var[ied] greatly between students…[proving my method at this stage was merely]… a trial and error method.' (Haenen, 1996, p.153). This orientating chart did not enable Claire to create

an essay of expert quality, and Claire was able to easily point out several elements which could have been added to the chart to enable her to write a better essay.

Although Claire had made some improvements in some areas of essay writing, and was making inroads into the educated discourse, she still had not grasped it as a whole. This was markedly apparent from the post SWP1 sound bite recording that she made with Jay and Jemma:

> Jay - An essay is an argument to get your point of view across
>
> Claire - An essay is also, a long answer to a question
>
> Jay - I agree with Jemma and Claire and it also has statistics and facts in

These three students used, four key phrases from the 'Essay criteria assessment tool' and the expert essays: 'argument', 'point of view', statistics', 'facts.' Claire does not use educated discourse and she is still referring to an essay as a 'long' piece of writing, although she has not included the word describe, as she did in the first soundbite.

A particularly interesting question is why Claire had not managed to improve from her baseline essay: destroying the counterargument; writing a sophisticated conclusion; using succinct and precise language; maintaining POV and including key words. She was not alone in being unable to make progress. There were four other students in a similar position: Lottie, Mildred, Mia and Vanessa. This was not concerning at this point, as Gal'perin and Talyzina's own research resulted in the students, on average, needing 14 trials to write the first grapheme and by the time they were writing the 20th grapheme only one try was necessary. (Haenen, 1996). I did notice that these five students struggled to create a paragraph that destroyed a counterargument and did not write a sophisticated conclusion. This formed the focus for SWP 2, *refer to Methodology Chapter*.

4.3.1.1.4 Stepwise Procedure Two

Before starting Stepwise Procedure two essay, I utilised the Overt Speech Stage in a different manner, this time I put the students in groups to talk through the construction of an essay and gave them 30 minutes to record their discussion. *Refer to Methodology Chapter, sections 3.7 and 3.9.2.* During this stage, Claire worked in a group with Jessie, Robert, Alexa and Ferry. I have included a transcribed section of their recording.

> Jessie: 'So the development paragraph what else to include?
>
> Robert: 'Use discourse markers.'
>
> Ferry: 'Yeah, put it for all of them, 'cos that's what you got to do, pretty much.'

Alexa: 'Statistics.'

Jessie: 'Anything else?'

Claire: 'Complex sentences, advanced style… to show an advanced style.'

Ferry: 'Oh, yes definitely.'

Jessie: 'Anyone got any elements to include in the development paragraph two?'

Ferry: 'Oh yeah, rule of three and reiterate personal experience.'

Jessie: 'We got that one.'

Robert: 'Emphasis one.'

Ferry: 'Reiterate personal experience.'

Claire: 'Yeah, but you done that in the first development paragraph.'

Ferry: 'So, you can do it again.'

Robert: 'No, that's like kind of conclusion; use statistics.'

Ferry: 'We could reiterate… the reit…'

Claire: 'The, what?'

Ferry: 'Make point of view clearer.'

Jessie: 'Attack issue.'

Claire: 'Pointing out what is wrong and justifying it.'

Alexa: 'Isn't that counterargument?'

Jessie: 'I put for counterargument, attack the weak spots and defend argument … suitable vocabulary?'

Claire: 'It is kind of the same.'

Jessie: 'We need sentence starters.'

Robert: 'Some people might think...'

Jessie: 'That is counterargument.'

Ferry: 'However, this is an easy mantra.'

Jessie: '[laughs] that is counter argument.'

Within this conversation, it is clear to see that the group are beginning to use the educated discourse of essay writing: 'counterargument', 'justifying', 'discourse markers'. The students are no longer just talking about long pieces of writing with lots of paragraphs. Claire, however, is not using significant educated discourse. Although one could argue that she is in a group that has

been using these terms and is thus complicit in the summary, the language she uses is not specifically that used for essay writing.

> Claire: 'Complex sentences, advanced style… to show an advanced style.'
>
> Claire: 'Yeah, but you done that in the first development paragraph.'
>
> Claire: 'Pointing out what is wrong and justifying it.'
>
> Claire: 'It is kind of the same.'

Although complex sentences are important within essays, they are not specific to the essay writing process. But she does show awareness of developing her language into using an 'advanced style' of writing. When she says: 'Pointing out what is wrong and justifying it,' she is trying to expand on Jessie's point 'to attack the issue', but it is Alexa who uses the educated discourse of 'counterargument'. Her lack of educated discourse might denote her lack of confidence or lack of understanding in the essay writing process.

Before starting SWP 2 essay, I had decided to use a similar template for the orientating chart, (refer to Methodology Chapter, section 3.3.2). However, Claire did not want to use it. She asked for large A3 paper and started to create a chart of her own. Claire developed her orientating chart in the following manner.

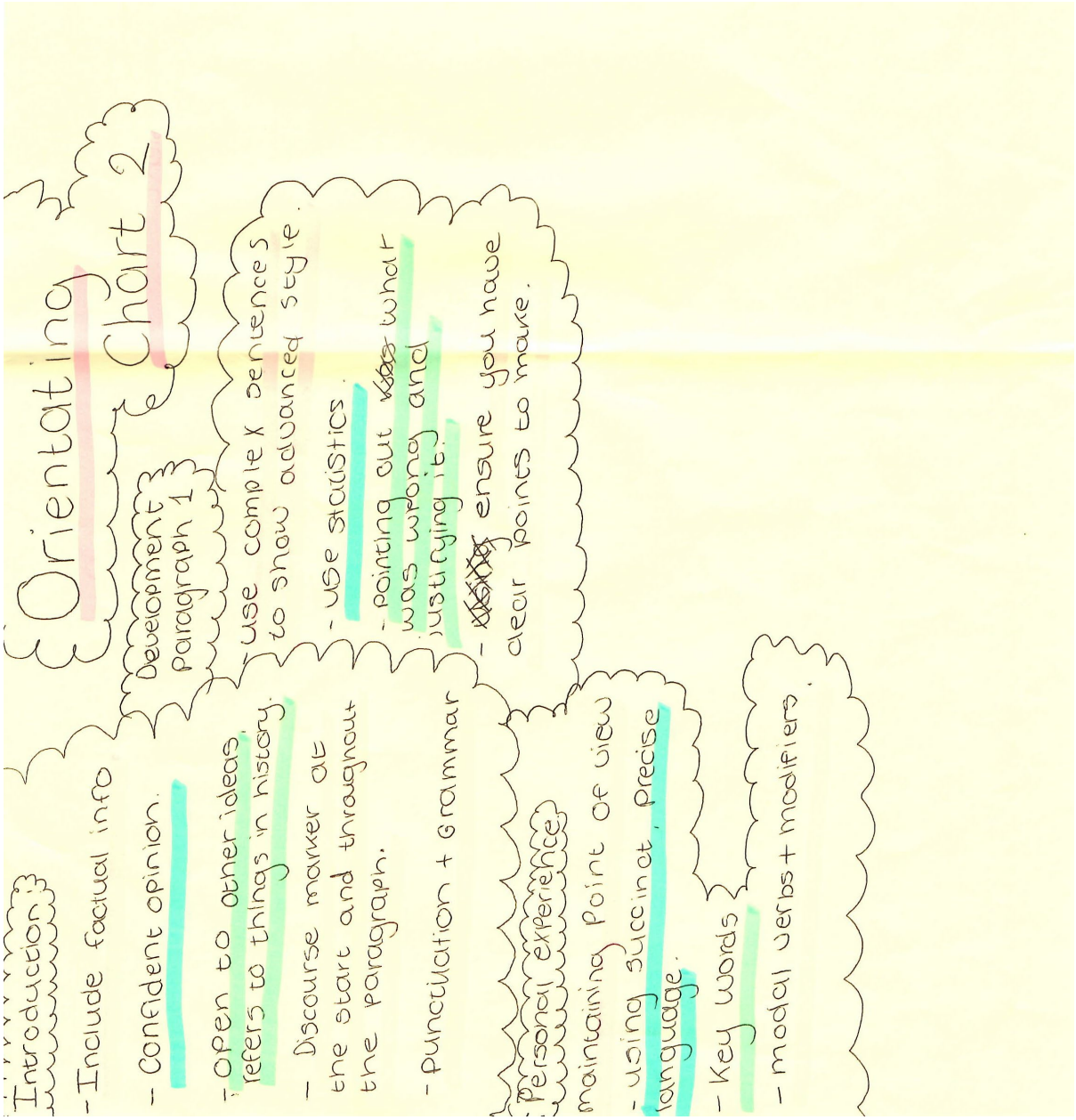


Figure 51: Claire's SWP2 Orientating Chart

Refer to Figure 54 above. This shows how Claire did not find the idea of a universal orientating chart helpful. Claire's independent development of her own orientating chart and her subsequent higher rate of achievement, supports my ideas earlier in this chapter, where I discussed the need for student involvement in the development of the orientating chart. The students' involvement in developing the orientating chart is important because it enables them to understand the mechanics of the task developing a meta-cognitive understanding of the

elements of this 'chart [by which key concepts are] learnt unexpectedly easily and in fact incidentally in the process of executing the learning tasks.' (Haenen, 1996, p.135).

Before the time allocated to write the SWP2 essay, I gave out a copy of the template orientating chart which had been populated by the students in their Overt Speech groups. Claire did not just use the populated template orientating chart, she also asked for her version above, figure 54, and a copy of Vanessa and Jessie's chart, that she had used for SWP 1 essay, and in addition, she stapled a full expert essay to this sheet and added a full discourse marker grid, refer to figure 55 below.

.

Add Information	Contrast ideas	Compare similarities	Cause and effect	Emphasis
Secondly Firstly finally In addition Furthermore Also Subsequently	Alternatively Despite However On the other hand unlike Although	Similarly As with Just as For example / for instance In the same way equally	Since Subsequently Therefore Thus Consequently Likewise Due to	Above all Essentially Primarily Significantly Indeed Certainly Moreover In particular

Figure 52: Full Discourse marker grid, created by Naruto and used by all students

As a result, Claire's SWP 2 essay is more sophisticated and addresses all four elements with which she was unable to fulfil in her baseline and her SWP1 essay. The title of the SWP 2 essay was: 'Should we keep animals in zoos? Discuss.' Here is the text from Claire's SWP2 essay:

> 'In todays world, many families love to travel to a zoo on a nice summer's day and meet all the fun and exotic animals that are there. But they are kept in small tight cages and are not able to run around in the wild and do what they want.
>
> In fact, on a popular online survey website 33% of people say animals should be kept in zoos but 67% say they shouldn't be. In a sense this could suggest most people think animals should not be kept in a zoo. How would you feel if you were always on exhibit wondering why there are so many people staring and pointing at you and even making you do tricks? They shouldn't be locked up from their habitat but most importantly their families.

For example, I have been to a zoo where there was a tiger, it was in a cage and didn't have very much space to move in , not that I know how it was feeling but it looked quite sad and lonely there were no other tigers in the cage for it to interact or play with and personally I think that is unfair.

Although some people may think that zoos are an amazing way to have individual interaction with exotic and wild animals face to face and that it can promotes wonder to enter our lives, however this is an easy mantra I don't deny that being able to see a animal so close up that is normally thousands of miles away, but that is where they should be in their own habitat with their families where they are happy and safe.

Additionally, animals are physically and mentally healthier in the wild than they are in zoos. They are able to have more exercise and can roam around and hunt in larger places and find the nutritional food they need and often animals are fed artificial foods that is not found in the wild.

Therefore, I disagree that animals should be kept in zoos, they shouldn't be caged away from their family and habitat. Each and every animal is equally precocious. This argues that they should be able to share god's earth like humans would instead of being caged like they are in jail.'

This SWP2 essay shows clear improvement in all elements, particularly in the four elements with which Claire had previously struggled. She was now showing a better understanding of essay writing compared to many of her class peers; there were only two other students who made similar progress. However, the three areas where Claire still showed lack of skill were in Spelling, grammar and punctuation. (Refer to Appendix 8.6.4)

On her post SWP2 questionnaire, Claire commented that she was very pleased with her essay and even before I had assessed it, Claire recognised her achievements: 'At first I was struggling to think of ways I could start the introduction, [but] I was pleased about my counter argument because it is something I haven't done before.' and 'I am proud that I have improved on my use of complex language.' Claire admitted to using her Orientating Charts 'most of the time' yet she still wished she had had more information on it: 'I would rather have more discourse markers or active verbs: almost, clearly, often, definitely'. Gal'perin said the orientating chart should create

a ‘clear picture’ which students can follow to produce something like an expert. And in Claire’s case that certainly seems true. Claire was also aware that she needed to: ‘improve on my SPAG’.

In the post SWP2 soundbite, Claire worked with Jay and Jemma. Here is their transcribed discussion:

> Jemma: ‘To make a … (laugh)…an argument essay you need to include a lot of point of view and facts and statistics’.
>
> Claire: ‘You also need to include at least one counterargument paragraph and at least pick up the bad points of the other person’s argument’.
>
> Jay: ‘You need to include a personal experience and have a very strong opinion.’

Claire’s educated discourse has improved. Here she is using the word: ‘counter argument’. Although the group do not go into any specific essay process detail, they do mention several elements within an argument essay: statistics, point of view, facts, personal opinion.

My literature review discusses how educated discourse, (Mercer, N., 1995) language, practical tools, (Daniels, Cole and Wertsch, 2007)and an orientating chart (Gal'perin, P., 1992 (1978)) given to students ‘operat[ing] in the instructional discourse […] provide learners with explicit knowledge’. (Martin and Rose, 2015, p.19) Claire’s progress is not linear. Gal’perin’s goal might have been to produce error free performance, but even his research showed students needed many practices before they got even close, 14 for the first grapheme and by the time they got to the 20th they could reproduce it in one try. (Haenen, 1996) Claire only had three trials at writing essays, a much more complex task than reproducing a grapheme. It takes time to master the complexities of essay writing and the learner shifts their focus in each trial. At first Claire was concerned about SPAG. Then she recognises the need for control. After her SWP1 essay she wants to focus on discourse markers and maintaining her PoV. But it wasn’t until SWP2 that she managed to bring more of the elements together in a more coherent and sophisticated style. Claire has learnt through Galperin’s Stepwise procedure, using intermediaries such as the teacher and other students that ‘it is through others that we develop.’ (Haenen, 1996, p.72) What Claire lacks is revealed in her dialogue and lack of educated discourse. There are many times when Claire’s dialogue is colloquial and informal. She has much more of a chatty style using imprecise pronouns and incorrect subject verb pairings.

My research questions questioned whether using Gal'perin's Theory of Systematic formation of actions and concepts and his Stepwise Procedure, including the SCOBA and orientating chart, could enable students to develop their essay writing skills and meta-cognition of the essay writing process. And in Claire's case, according to these results, Gal'perin's Stepwise Procedure has been successful in her achieving an essay written like an expert. While her writing has improved, it is interesting to speculate whether further study in developing educated discourse would help Claire develop essay writing skills and meta-cognition of that process.

4.3.2 Case Study Two: Kim

4.3.2.1.1 Background

Kim was a white British male with a July birthday. He was not categorised as Pupil Premium, or SEN or EAL. He lived with his mother in a one parent, one child unit. His father lived in the town and he saw him weekly. In year 7 Kim's reading age was tested using the: WRAT 4 – Wide Range Achievement Test. This test assessed his reading age to be 13.9; that was above his school age, which was 11 years old at the time of the test. His Key Stage Two SATs – Standardised Achievement Tests – grade in English was 5b. This is a higher score for KS2. He was therefore predicted to gain a Higher EGT – End Grade Target of A*, A or B.

The reporting system at the school during the data collection period, captured Attitude to Learning – ATL – and General Progress towards end grade target – GP (refer to Claire's Case Study Chapter: section 4.3.1). Kim's achievement and progress in year 7 and 8 was mixed. In year 7 English, he achieved all grade 1 for ATL in each term, while in History he achieved grade 1 for two terms and a grade 2 in the other. However, once in year 8, his first term for English was graded 3, defined as inconsistent and coasting, for ATL and GP, but then managed to be more consistent scoring grade 2 in ATL and GP for all terms for the rest of the year. In History he maintained grade 2 in each term for ATL and GP. These grades show Kim was prone to inconsistency of effort and progress. His inconsistency shows through, at times, during my data collection period.

Kim, in the evaluation questionnaire after writing his baseline essay, had indicated he was 'happy' to write an essay, but would normally at 'least expect a basic outline from the teacher', to help him structure the essay. He also thought he had written about four essays since attending WS school and had been taught to write essays in English lessons.

In the first sound bite I recorded, which was before the baseline essay was written, Kim shared his ideas with Robin and Lisa. Their recording was not a conversation but a series of statements about essays. Robin speaks first, followed by Lisa and then Kim. All three read out a statement.

> Robin: 'An essay is a piece of informative non-fictional writing that analyses a topic such as a book or it can be a complex answer to a question.'
>
> Lisa: 'An essay sometimes requires a certain amount of words or paragraphs.'
>
> Kim: 'An essay is a piece of writing that can take up to 3000 words to describe a subject.'

While Kim reads his statement, he is laughing and trying to speak with some sort of accent, that is indeterminable. This perhaps suggests some degree of embarrassment or deflection about having to record his voice in front of others, or perhaps dismissiveness about the topic or the situation. Kim gives a vague overview of the idea of an essay without any specifics of the elements. He uses the word 'describe' rather than discuss, showing a lack of understanding of the conventions of an argument essay. He also appears to have taken an arbitrary number of words: 'up to 3000'. I say arbitrary, as I have no understanding of why he might have chosen to use the number 3000, rather than 300, or any other number. Essay length was not prevalent within the WS school in year 9. His general statement about essays highlights that he is either not yet aware of the specific elements of an argument essay or the structure required, or he is unable to vocalise these elements due to a lack of educated discourse. (Mercer, N., 1995; White and Frederiksen, 1998)

4.3.2.1.2 Baseline Essay

The title for the essay: *"Children of school age should not be working at all. They should be focused on their schoolwork and helpful to their parents. Working for money comes later." The councillor will take part in a debate at your school. Write a speech in which you argue your point of view in response of this statement.*

Here is the text from Kim's baseline essay, written as a true transcript incorporating his mistakes:

> 'Children should have a choice to go to school or / and to go to work at a reasonable age like 14 and 15. When they reach that age that's when they can choose but before that you should only be allowed to go to school.
>
> The reason for this is because anybody who is lower than 14 or 15 wouldn't have enough education to be ready for the world so they would be educated as much as possible. Once you reach the required age you can have a choice of a small part time job as well as school if they want some money to be earned. When they work it cannot be available in school hours only after as they still need the proper education. Another rule is that they should not be allowed to work night shifts or late into the night 10 o'clock maximum. Work will also be optional only to the student and cannot be force by any other people including their parents or guardians. If a student breaks one of these rules they will get a warning and if they break it again they won't be allowed to work until they leave school UNLESS they are some what of a poor family who will starve if they won't work.

These jobs will be not a high paying job like at fast food restaurants, paper round, postman, waiter, supermarkets, cleaner, dominos or any chip / pizza ship, as they still don't have the right amount of grades to get a proper job that pays well, when they leave school they can still carry on the job they've already got or decide to get a new one.

I think this will get them prepared for the real world and have a taste of what their future will be like, so I think it would be an amazing experience for them.'

Kim did not create a written plan for this essay, despite my suggestion that students might find it better to note down a plan before starting to write the essay. On the post essay questionnaire, Kim commented: 'I worked out a plan in my head'. In answer to the question: What resources did you use? Kim replied: 'My own brain and past knowledge'. This could suggest that Kim was confident with this essay writing and felt able to write it without much help. This subsequently could reinforce previous teaching and learning about essay writing he has received, and feels confident enough not to need support, plan or scaffold to write. This predisposes a stage where his essay writing is automatic, it is worked out in his head, or as Gal'perin says: 'mental action' where a student no longer needs external help or support. The mental action 'entails singling out those properties of things to which an action is to be applied and through this the objective connection between these properties and the instruments of an action becomes evident to the pupil and serves as an explanation of the whole process for him.' (Gal'perin, P., 1992 (1978), p.59). Kim has reached a level of being able to automatically create an essay. However, the essay he creates is simple and reflects his lack of understanding of his lack of essay writing skills. His metacognition at this point is weak. One of Gal'perin's criticisms of the traditional 'trial and error' method of teaching without his Stepwise Procedure was that it led to 'learned not comprehended' material in the students heads (Gal'perin, P., 1989 (1957), p.51). In this case Kim thinks he has learned the essay writing process, but his execution of the task shows he has not comprehended the complex task of essay writing.

In the baseline essay, according to my assessment using the Essay Assessment Criteria Tool (refer to figure 11) Kim performed well in five areas. (Refer to appendix 8.6.6) In this essay, Kim is very clear in his point of view that students should be able to have a 'choice to go to school or / and to go to work at a reasonable age'. He thinks that age should be '14 or 15', which he states twice. He justifies most of his points giving some reasons for his ideas that students could leave school at 15 is because they would have had: 'enough education' and 'a

proper education'. He reinforces his point of view using modal verbs: 'should', 'can' and 'will' and includes the word 'rule' to try to emphasise his strong points. In addition, he uses capital letters 'UNLESS' to underline his point about poor families and how they should have a different set of 'rules', making allowances for working students if their families will 'starve' without the wage of the young person. Despite this empathy, the overarching impression is that he is creating policy rather than arguing a point. The use of modal verbs, however, does echo the phraseology of the statement within the essay question: *"Children of school age should not be working at all. They should be focused…'* Kim thus shows some control of tone as he uses similar modal verbs. His introduction and conclusion are focused on the essay question. In answer to the statement his first sentence is: 'Children should have a choice' [about work or school] and his last sentence suggest he thinks that working in part time jobs is beneficial for students even if they are still at school as it would be: 'an amazing experience for them'.

Kim does not use any sophisticated discourse markers to indicate the development of his essay. He uses simple connectives such as: when, but as, also, so. Although he uses three paragraphs, his second paragraph covers a number of topics: Taking on a 'small job'; working 'late into the night'; consequences of 'break[ing] one of these rules' and the alternative provision for 'poor' families. This accumulation of points within one paragraph indicates a lack of understanding of general paragraph rules and does not allow for development of his points or ideas.

Furthermore, despite some confidence in tone and succinct language: 'reasonable', 'guardian', 'optional', Kim tends to use informal conversational phrases rather than formal grammar appropriate for a speech. For example: 'when they reach that age that's when they can choose but before that you should only be allowed to go to school'. This sentence reveals a colloquial, informal perspective. He moves from calling young people 'they' to 'you'. This mixing of pronouns is common in informal dialogue and children still trying to grapple with grammar rules. Although the context of the debate is at school, Kim's speech shows a lack of clarity of his audience. He could decide to either address the councillor, or the students. He might even choose to do both within his speech, but he should make it clear whom he is addressing and not change it in the middle of a sentence.

The use of the word 'like' in the phrase: 'not a high paying job like at fast food restaurant', is very common in informal conversation, and although can be used when giving an example in formal text, his sentence structure, in this particular sentence is ungrammatical, making it sound as if the job at the fast food restaurant is high paying. The written sentence could have been improved

with punctuation. Kim also shows he is insecure in his use of some adjectival phrases 'anybody who is lower than 14 or 15', again highlighting his need to improve succinct and precise language.

After I had returned the marked essays and he could review his achievement, Kim answered the question: How could you improve your essay? 'To improve I could use the baseline essay assessment to try to attempt every single one[of the criteria].' Although this is a very generalised statement, it shows motivation to improve, while also revealing lack of metacognition of how exactly to improve.

4.3.2.1.3 Stepwise Procedure One

To construct an Orientating Chart, Kim initially worked with Robin and they created a very structured orientating chart without any extra notes. They had taken the blue and the red sheets, cut them into pieces and categorised them as: introduction, second paragraph, central paragraphs, and conclusions (refer to The Appendices section 8.4.9). The next day, however, Robin was absent, so Kim chose to work with Gilph and Robert (whose partner was also absent) and together, they completed the orientating chart that Gilph had started the previous day. Although I had given some groups the option of working in different, quieter rooms around the school, this group worked in my room and therefore had to put up with the fact that I might have been listening into their discussion. I noticed a couple of times, that they whispered. Perhaps they were off task or just didn't want me to hear part of their discussion.

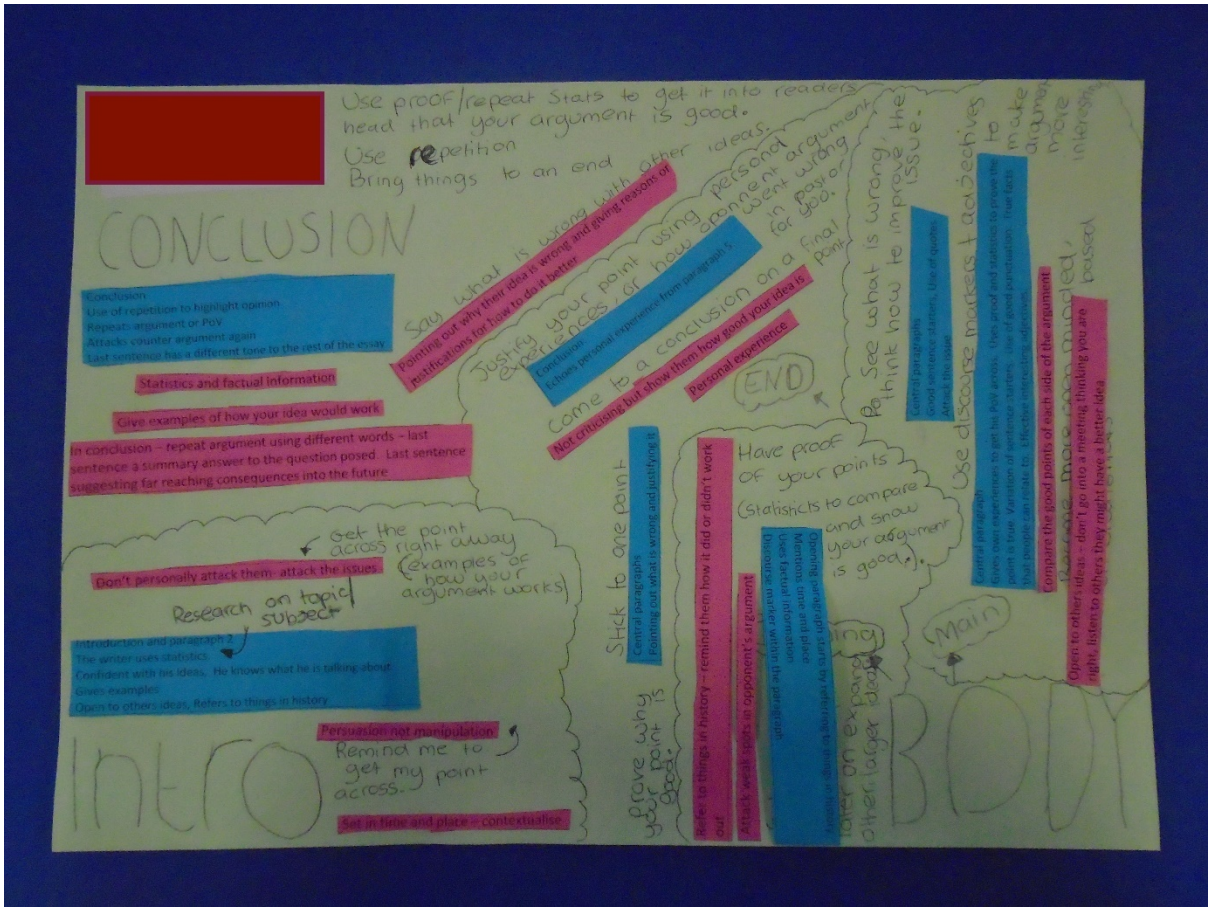


Figure 53: Orientating Chart created by Kim, Gilph and Robert.

The Orientating Chart created by Kim, Gilph and Robert, (refer to figure 59 above) was fairly complicated and non-chronological, even to the point of being: 'terrible to look at' (Gal'perin, P., 1992 (1978), p.77) something Gal'perin thought was necessary in an orientating chart if it was to embody all the criteria for a task. The group included some of the typed up words and phrases from previous class discussions but had added a lot of their own points in handwriting around the sheet. Some of the typed words and phrases were stuck on the main sheet but partially lifted up to reveal the rest of their handwritten sentences. Their handwritten phrases and sentences show how they are developing their understanding of argument essay writing. For example: 'Use proof and repeat stats to get it into your readers head that your argument is good'. 'Prove why your point is good'. 'Justify your point using personal experience'. And: 'Use discourse markers and adjectives to make your argument more interesting.' One of the ways Kim could improve his essay structure is to use discourse markers. At this point it seems as if the construction of this orientating chart is indeed supporting his development and understating of the elements of an argument essay The group are beginning to show educated discourse of essay writing through

the use of key words and phrases, but in thinking that 'discourse markers and adjectives to make your argument more interesting' implies that they do not yet understand the difference between structural improvements and a piece of writing that might engage the reader.

Before the class wrote their SWP 2 essay they had a chance to look at other students orientating charts. After reviewing the different orientating charts, Kim, Gilph and Robert chose to use their own chart to help them write their essay. At the time they commented: 'We think it will help the most because it gives more notes instead of just pieces of paper stuck onto a sheet.' This was true, in that their chart was the only one that included so many extra notes and points written by hand.

4.3.2.1.4 Stepwise Procedure One Essay

The Stepwise Procedure One essay was entitled: *Students who want to do practical jobs in the future should be allowed to start apprenticeships at the age of 14 years.* Here is Kim's text for that essay.

> 'In my opinion students shouldn't be allowed to do apprenticeships at the age of 14 and should still in fact keep it at 16 years of age.
>
> Firstly, I will explain why it shouldn't start at the age of 14. But I can see why people want this to happen the more younger you are to learn stuff the better. However things like apprenticeships at the age of 14 is NOT a good idea here is why:
>
> - Most teenagers will not be mature enough at the age of 14 and should wait a couple of years to be fully ready.
> - Some teenagers at 14 might not be suitable for apprenticeships which may lead to higher stress levels or in some possible circumstances depression.
> - In all honestly do you think that children should basically have a real job at 14? No, no they shouldn't they aren't the least bit mature enough to have enough experience to start to go out and have a job.
>
> Hopefully, by now you will start to see that apprenticeships at 14 is not a good idea but if you still think it is I respect that as that is your opinion. However, I think it is safe to say at minimum age 16 which doesn't seem to have any down sides to it whereas 14 has got quite a few.
>
> In conclusion, I personally think that apprenticeships should stay at 16 years of age instead of 14, as there are more benefits at the age of 16. I hope you can see point that I'm

trying to get across even if you don't personally agree with it which I will obviously understand.'

According to my assessment of Kim's essay, using the ECAT Kim had made some progress. His main improvements were paragraph structure and including a counter argument. He still lacked skills in the area of tone and succinct language and had no change in some other areas (Refer to Appendix 8.6.7). Certainly, Kim makes better use of sophisticated discourse markers: 'firstly', 'however', 'in conclusion' and his counter argument, albeit simple, ' I can see why people want this to happen…' gives a reason why people might want to start apprenticeships earlier and Kim also attempts to create his destruction of that counter argument, 'however…it is not a good idea here is why' and adds his three main bullet points. Kim's ideas remain focused, and he gets his point of view across.

Despite of improving, Kim admitted, in his questionnaire, to not using his orientating chart at all. In fact, I have noted in my research journal, that Kim left his orientating chart face down for the whole of the writing period. He did, comment, however, that he referred to his plan, which I unfortunately did not keep a copy of, and the information sheet I handed out to support the essay writing process. Kim also indicated on the post essay questionnaire that he was pleased that he: 'didn't need much help [writing the essay]'. This underlines the fact that he didn't use the orientating chart. Gal'perin claimed that the orientating chart was one of the parts of the Stepwise Procedure that helped the students perfect the task, a 'scientifically based, learner-proof cheat sheet.' (Haenen, 1996, p.135) Although we can see that Kim developed and improved on his essay writing skills, he had obviously retained information and learning from the classroom session, we could argue that if he had used his orientating chart, he might have improved further. Gal'perin believed a student had 'learnt' the 'object content of an action' only when 'fully and meticulously transferred from the material action to the verbal plane….it is only at this point that the object content enters entirely into consciousness.' (Gal'perin, P., 1989 (1957), p.52) The idea of the orientating chart is so that the students can learn while solving problems (in this case, writing an essay). Kim seems to be relying on the content he has already learnt rather than trying to stretch himself to learn and develop further.

Furthermore, the central section of his essay is unlike any of the expert essays we deconstructed as a class, as it includes three bullet points. The apprentice information sheet that I provided to help them formulate ideas for their essays, did include some bullet points. I surmise that Kim, in referring to the information sheet, also used that as a model for his essay structure, rather than

referring to the orientating chart, which lay face down on his desk. The information sheet I had created, was merely a few notes taken from the Government apprenticeship website, I had only provided it for them, so that the students had facts to which they could refer in their essays. Therefore, it seems that Kim did indeed use help sheets to help him write his essay, they were, however, the sheets which didn't help him as much as Gal'perin, or I wanted. The fact that he has made progress, is perhaps to do with the Stepwise Procedure that we went through as a class. To Gal'perin the Orientating Stage of the Stepwise Procedure becomes a kind of 'cognitive map for an orientating basis'. My aim had been in class to discuss the expert essay and orientating chart in 'so much detail that it becomes clear to the learner how the operations involved are connected to changes in the material' (Haenen, 1996, p.134) For Kim, perhaps this was why he improved. He wrote that he was pleased that he had 'improved since last essay, [but wanted to] Attack more on the counter argument [and be] more formal than informal.'

However, there were still some areas that he needed to work on, one of them being his lack of precise language. He continues to write in a colloquial and informal manner at times, for example: 'the more younger you are to learn stuff the better' and 'age 16 which doesn't seem to have any down sides to it.' He also appears too equivocal in his essay approach and not forceful in getting his argument across: ''but if you still think it is I respect your opinion,' and ends: 'I hope you can see point that I'm trying to get across even if you don't personally agree with it which I will obviously understand.' This last sentence creates a rather woolly ending to his argument.

After reviewing the essay, I asked students to record their ideas about essay writing in a two minute sound-bite. Kim was placed in a group with Robin and Lisa. I have included the whole of their conversation, as it shows a developing use of educated discourse within the group and some improvement in Kim's own use of educated discourse. They are answering the question: What is an argument essay?

> Robin: 'An essay is a piece of non-fictional writing that reviews or uses … argues an opinion. It can be like a debate and it can be like … it's normally on a single topic or subject. … so an essay you have to use … '
>
> Lisa : 'Discourse markers.'
>
> Robin: 'Yes, and <u>professional</u> … but you don't have to argue.'
>
> Kim: 'You <u>have to</u> argue.'

Lisa: 'You've got to put your personal opinions.'

Kim: 'So, you say the other thing is good.'

Robin: 'Yes, and you have to use facts and statistics and stuff, and it's meant to be quite easy to read … sort of, it's got to have a glue.'

Lisa: 'Custard cream stuff.'

Kim: 'Just a piece of writing arguing the other person's opinion is bad and theirs is absolutely terrible.'

Robin: 'But you have to have the other person's argument in there to show how yours is better.'

This conversation shows that instead of focusing on the length of the essay, as Kim did in the first sound bite: '3000 words', these students are now thinking about the components (discourse markers, opinions, statistics, bias) and the purpose to argue and persuade the reader to their way of thinking. It is interesting that Kim emphasises the need 'to argue the other person's opinion is bad and theirs is absolutely terrible'. Kim seems to be reflecting upon one of the elements he failed to include in SWP 1 essay, and thus highlighting his developing understanding of the essay writing process. It also might suggest the importance of the Overt Speech stage, actually talking to each other about what the essay writing process itself. The group are beginning to exemplify elements of educated discourse and metacognition of the essay writing process.

4.3.2.1.5 Stepwise Procedure Two

After the Orienting and Material Stages of Stepwise Procedure Two, I utilised the Overt Speech Stage in a different manner. I put the students in groups to talk through the construction of an essay (refer to Methodology Chapter, sections 3.3.4). In this grouping, Kim recorded with Naruto, Mia and Rosie; they speak for 21 minutes. During the first 15 minutes they discuss the essay construction and the last 15 minutes is mostly made up of laughter and indistinct chatter. This again could indicate Kim's lack of confidence in speaking in groups and need for displacement. Naruto leads the group ensuring they are on task: 'Right, introduction,' 'what else do you put for vocab?' 'What is next?' 'What have you put here?' Together as a group, however, in between the indistinct chatter and laughter, they use educated discourse to explain the structure of the essay. For example, I have included extracts from the recoding. I have placed them in chronological order as they were said within the 21 minutes of recoding, but I have cut some unfocused exchanges.

Mia: 'Right, for your introduction you should… refer to history, mention time, and place, use factual information and discourse markers.'

Kim: 'You have to put the key words, the modal verbs, modifiers and active verbs.'

[cut]

Naruto: 'As some discourse markers might go with certain paragraphs, so like with personal experience you could use 'notably'.'

[cut]

Rosie: 'Right, the development paragraph?'

Naruto: 'I only did one of them, cos all the development paragraphs are all the same, so I didn't really do…'

Rosie: 'So, what did you write?'

Naruto: 'I put attack the issue. What did you put Mia?'

Mia: 'I put give examples and give facts.'

Kim:[in a silly voice] 'I put you need to put more facts, time and place, modal verbs, key words, and normally…'

Naruto: 'I had other discourse markers: in addition and furthermore, likewise, also and in effect.'

[cut]

Naruto: 'What is next on the sheet? Shall we skip the next development paragraph because it is the same isn't it?'

[cut]

Naruto: 'I put: include solutions, like to the problem obviously, I shortened it 'cos I am quite clever, so I understand that [laughter] and give examples.'

[cut]

Mia: 'I put, for sentence starters: other people might think and I don't think …'

[cut]

Kim: 'What is the counter argument?'

Naruto: 'I don't want to deny that, dot dot dot, but, dot dot dot'

[cut]

Kim: 'You have to not criticise them for making your point'

[cut]

Rosie: 'What about a good conclusion?'

Naruto: 'Yes, good conclusion. Are you ready? I did quite a lot for conclusion which is why I did it really small. Repetition of earlier points. That's true that is …'

[cut]

Kim: 'Is this still counter argument?'

[cut]

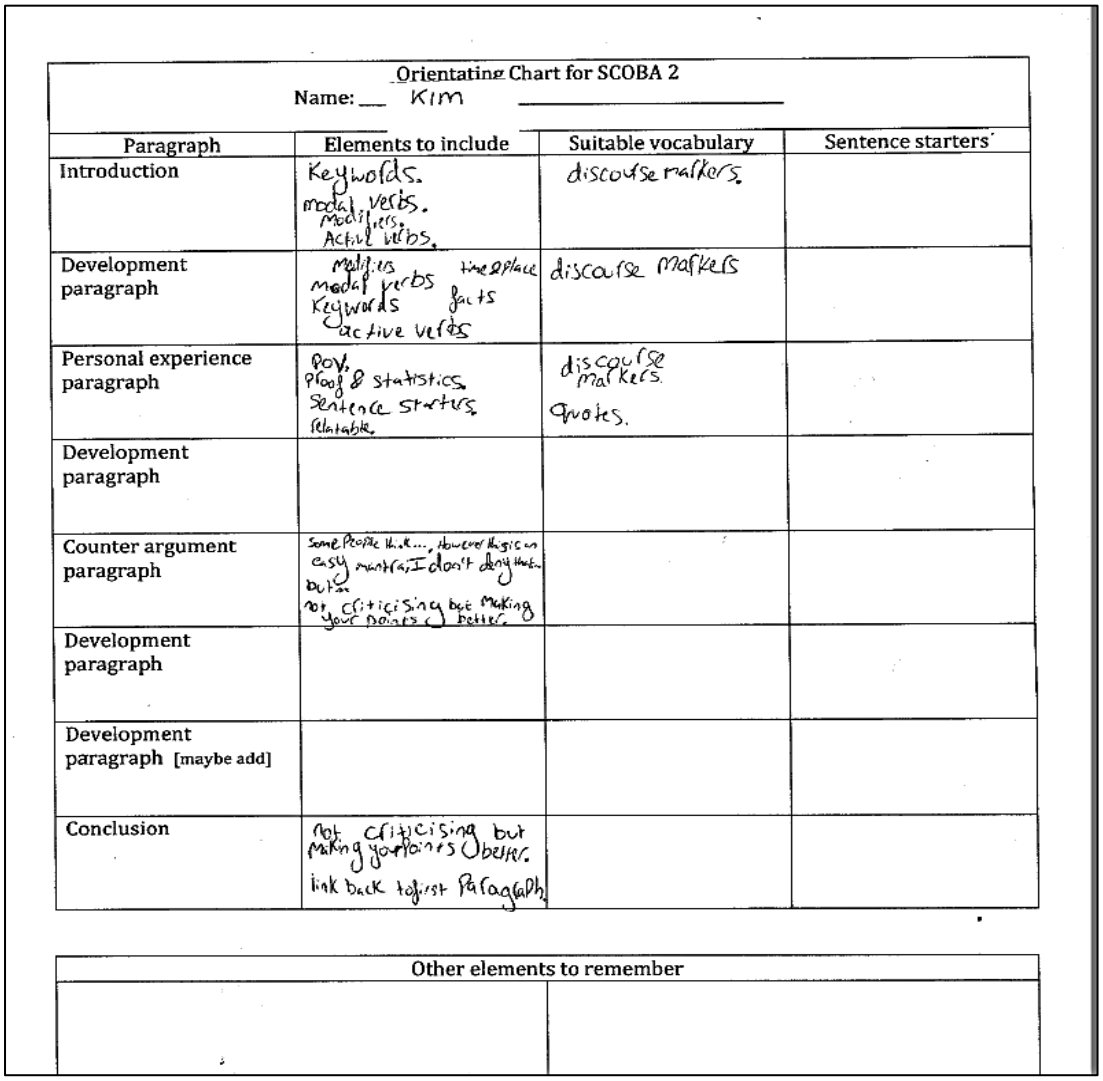
Naruto: 'Conclusion … last sentence should be the consequences…like a ummm… like a long thingy [laughs] …'

Naruto: 'And the last one – rule of three …what are you putting there, Mia?'

[cut]

Kim: '… you have to make your PoV again, make your PoV clear. '

The transcript above shows that the group has a good understanding of the structure of an argument essay. They are conversing using educated discourse to discuss the different elements that need to be included. They work through from introduction to developing paragraphs, counter argument and then onto the conclusion. Kim appears clearer about a number of elements and shows a more precise understanding. 'Key words, the modal verbs, modifiers and active verbs' and 'to make your PoV again, make your PoV clear'. After SWP 1 essay Kim was aware that he needed to improve upon succinct and precise language, and his understanding of modal verbs, active verbs and modifiers could help him to be more precise. The other area Kim needed to improve upon was his use of counterargument. In this extract, however, his understanding of counter arguments seems unclear. He asks: 'What is the counter argument?' Highlighting his need for clarity. After Naruto has answered, Kim tries to elucidate, saying: 'You have to not criticise them for making your point'. However, Naruto refutes this as a way of counterarguing and retorts: 'That was actually my point and Miss wrote it on the board and on that piece of paper thing we printed off and …' Kim, then asks: 'Why isn't it on your sheet?' At this point Naruto tries to clarify why he doesn't think the statement supports counter-argument and says: 'I didn't like it, we are not talking about it…it is not an argument'. Kim appears unable to keep up with the conversation at this stage, and after another 1 minute 45 seconds of conversation, asks: 'Is this still counter argument?'



Orientating Chart for SCOBA 2

Name: Kim

Paragraph	Elements to include	Suitable vocabulary	Sentence starters
Introduction	Keywords. modal verbs. modifiers. Active verbs.	discourse markers.	
Development paragraph	modifiers time&place modal verbs facts Keywords active verbs	discourse markers	
Personal experience paragraph	POV. Proof & statistics. Sentence starters. Relatable.	discourse markers. quotes.	
Development paragraph			
Counter argument paragraph	Some people think..., however this is an easy mantra, I don't deny that... but... not criticising but making your points better.		
Development paragraph			
Development paragraph [maybe add]			
Conclusion	Not criticising but making your points better. link back to first Paragraph.		

Other elements to remember	

Figure 54: Kim's original Orientating Chart created before spending time in the Overt Stage group discussing essay development.

Complete Orientating Chart KIM			
Paragraph	**Elements to include**	**Suitable vocabulary**	**Sentence starters**
Introduction	Set in time and place Refer to history Introduce opinion	certainly indeed essentially	Today in 2017… For many years people believed…
Development paragraph	Build your POV with Statistics Facts Rhetorical question (x1)	demonstrates signifies exemplifies	Significantly… Not only does this suggest…it also implies Primarily

Personal experience paragraph	Personal story – or friend or relative Explain consequence Compare with issue	Emotive language for instance for example notably exhibits	In particular, my personal experience with… Even though this creates a…there is also…
Development paragraph	Comparative example: famous people or literature character Emphasis Explain how and why your POV works	evidently undoubtedly in fact	This example demonstrates… Furthermore… In a recent survey… Perhaps this could explain…
Counter argument paragraph	An opposing POV Dismiss it as insubstantial	however, alternatively whereas apart from	Some people might think… However, this is an easy mantra… I don't deny that…but…
Development paragraph	Facts that audience can relate to Expert opinion or quote Justify your PoV	In a sense Highlights Indicates exaggerates	Nevertheless, this is… Although some have… Moreover, the evidence here… Clearly this proves…
Development paragraph [maybe add]	Weak spots in opposing argument Extra point of persuasion Rhetorical question	portrays emphasizes supports argues consequently	Above all… Despite some…. It is obvious that…
Conclusion	Repeat argument referring back to the first paragraph Mention opposing opinion Rule of three Consequences for the future	certainly subsequently underlines reinforces clarifies	Finally Therefore In conclusion I strongly disagree
Other elements to remember			
Identify **key words** in title – select synonyms to use throughout the essay Ensure you **maintain your Point of View** (POV)		**Vary sentence starters** – each sentence starts with a different word	
Point, Evidence, Explain, language		**Rhetorical Questions**. Only use rarely. Start one paragraph with one and answer your own question. Do not end with a rhetorical question.	

Figure 55: Kim's Orientating Chart for SWP 2. Highlighted areas show the elements he focused on during his essay writing.

The two figures above (figures 61 and 62), show the difference between what Kim wrote on his chart individually and how he populated it after being in the Overt Speech group. We can see that it also contains many of the elements that he emphasised in the Overt Speech group, such as 'keywords, modal verbs, modifiers and active verbs.' His handwritten chart only refers to the terms, rather than including examples of the words within these terms. For instance, he uses the

term ‘discourse markers’ three times, but only includes two examples within the section entitled counter argument, ‘some people think’ and ‘however’.

The lack of population of his chart (figure 61), could indicate lack of effort, or lack of understanding. However, part of the recorded conversation between the students during the Overt Speech stage, captures an insight into Kim’s lack of focus and poor ATL across the school. This extract occurs after 14 minutes of conversation:

> Kim: ‘You realise, right, she’s going to give me detention.’
>
> Naruto: ‘We are not going to get detention; we have done our work, look?’
>
> Kim: ‘I know, but surely the random noises are a low ATL. She’s going to say ATL 3!’
>
> Naruto: ‘Bing bong!’
>
> [sounds of clicking fingers and knocking]
>
> Kim: ‘Stop. Stop.’ [laughter]
>
> [more clicking and knocking]
>
> Kim: ‘No, no, she will give me ATL 3 on my report and then [*house leader’s name omitted*] said… I bet she will.’
>
> Naruto: ‘I need to shout.’ [laughter]
>
> Naruto: ‘Here is the legit one, it is all there. If you don’t understand the writing, you can say… ask her…’

The House leaders at WS school put students on a weekly behaviour report if they had scored grade 3 for ATL (this represented an inconsistent attitude towards learning in that subject) in more than two subjects in any one term. At the beginning of this chapter, I referred to Kim’s grade for English ATL and GP as 3. Kim, in this extract, shows a concern that he is going to get a grade of 3 for his behaviour during the lesson as he thinks he hasn’t shown enough focus and attention to learning during the lesson and the recording. The consequence of gaining a score of 3 on a behaviour report generated by a House Leader, at that time, was that the student would be given a break time detention, as punishment for failing to show a good attitude to learning during lessons. His lack of completion of the handwritten chart could have gained him a grade of 3, being as other students completed their charts during the lesson without problem. It is natural, therefore that his focus of attention is on not being given an ATL of 3; he doesn’t want a detention. This perhaps causes him to be less focused on the content of the lesson and more conscious of his behaviour.

The work at the Overt Speech Stage, in groups, constructing and vocalising essay progress, seems to have helped Kim to be more focused in the use of the orientating chart in SWP 2 essay. In the questionnaire, post SWP 2 essay, Kim commented that he had used his orientating chart: 'a lot' and not referred so much to his notes or other factual help sheets while writing the essay. Kim has realised now that the orientating chart can help him to write a better essay. The Overt speech group enabled him to develop his educated discourse and compare his understanding with others. These, and perhaps his desire to improve his attitude to learning, enable him to make more progress.

4.3.2.1.6 Stepwise Procedure Two Essay

The essay title for SWP 2 essay was: Should we keep animals in Zoos? Here is the text that Kim wrote in response to that essay title:

> 'The question many people have been asking until this day is 'should we keep animals in a zoo?' Now, there has been a lot of debate on this subject of matter, but I'm going to give you my opinions and reasons on why it IS good to keep animals in zoos.
> To start this off zoos are NOT trying or making animals extinct in fact they are doing quite the opposite. Good zoos play a critical role in fighting extinction one good way zoos are doing this is through captive breeding and recovery programs of endangered species. Each year zoos contribute $350 million directly to conservation.
>
> When I was a young boy and I went to my first zoo I was filled with excitement seeing all these foreign animals in real life made me feel giddy inside. I remember seeing a giraffe plucking the green leaves off one of the trees, a hippo taking a cool bath in a hot summer's day and an elephant looking after its younger sibling when their mother wasn't there. Do you really want you or your children from missing out on these amazing experiences? No, I wouldn't think so, there is much more than seeing an animal on T.V. you know?
>
> As I have stated in my 2nd paragraph zoos do not increase the chances of extinction in animals. I know some might say making wild animals domestic is ridiculous and that it removes them from learning valuable skills like how to hunt and survive in the wild. However in many zoos they have these exercises for the animals to learn these skills while still being in a zoo, they would hide meat around an open area and make the animal use its sense to find these pieces of meat.'

Kim's essay for SWP 2 reads far more cogently than his former essays, and despite some elements being missing, Kim has made progress. (Refer to Appendix 8.6.8) Kim only included one discourse marker to link paragraphs, 'however', and due to time constraints, he failed to complete his essay, resulting in no conclusion. His general grammar has improved, although he still uses some colloquial expressions, such as: 'The question many people have been asking until this day' and 'Do you really want you or your children from missing out'.

In his post essay questionnaire, Kim commented that he felt he did much better in this essay and the only difficulty he had was: 'Making up personal experience'. Once he had reviewed my marking of the essay he wrote: 'I need to improve in rechecking my essay for grammar mistakes'. In this essay Kim said he used his orientating chart 'a lot' to support his writing, and the evidence supports this.

However, in the soundbite recording after the essay had been written, Kim reiterates what he had said during the Overt Speech Stage, and one might argue that he had failed to develop his educated discourse any further. The question they had to discuss was: What is an argument essay? In this extract, which I have cut, Kim is speaking with Robin and Richard:

> Robin: 'To make a good counter argument essay you need to include lots of key points and make them clear.'
>
> Richard: 'And you need to attack the weak spots in the counterargument.'
>
> Kim: 'You need to repeat the key words and bring up statistics and facts.'
>
> Robin: 'Yeah, instead of just criticizing their point of view show how good your idea is and also show future consequences of both your idea and the counter argument's idea.'
>
> Kim: '… umm, you have to keep bringing up your PoV.'
>
> [cut]
>
> Kim: 'And you have to repeat the key words.'
>
> Robin: 'And the key points.'
>
> Richard: 'Use a variety of sentence starters to make the essay seem more interesting.'
>
> Robin: 'And use complex sentences and simple sentences so it is interesting…'
>
> Kim: '… interesting connectives and openers.'
>
> George: 'Discourse markers.' [all laughing]

This extract shows how the students are developing their educated discourse and showing a far greater understanding of the essay writing process. But whereas Robin and Richard include the

elements of counter argument and essay progression, Kim still is talking about PoV and key words.

Gal'perin's Stepwise Procedure helped Kim to make progress in his essay writing ability and his educated discourse, although one could argue that the writing ability has made more progress than his educated discourse. Gal'perin was convinced that the Orientating Stage of the Stepwise procedure was key for students to, 'appropriate them within the teaching-learning process'. (Haenen, 1996, p.135). Kim clearly made more progress with his essay in SWP 2 when he admits to using the Orientating Chart; 'a lot'. Gal'perin did not want the 'rote learning' of students but advocated his orientating chart, if followed, the 'action is thus formed not bit by bit but immediately in the aggregate of all the necessary steps and only in an optimal variant provided by the SCOBA' (Gal'perin, P., 1989 (1974), p.71). Or as Haenen described it 'the chart is learnt unexpectedly easily and in fact incidentally in the process of executing the learning tasks.' (Haenen, 1996, p.135). The evidence I have shown in Kim's case study supports my research questions that Gal'perin's Theory of Systematic formation of actions and concepts and his Stepwise Procedure, including the SCOBA and orientating chart, has enabled Kim to progress his essay writing skills according to my ECAT. In addition, Kim's educated discourse has changed, he is using more academic language on some occasions, but lapses back into his conversational style at others.

However, an argument essay is not a simple task unlike the handwriting tasks Gal'perin used with the 5 and 6 year olds in his research. The orientating chart cannot be a simple algorithm to producing a perfect essay every time, as each essay they might have to tackle will necessarily involve a different content, context, and audience. In this instance it is perhaps the Overt speech stage in which more learning occurs. The orientating chart helps, and Kim makes progress, but Kim made more progress in SWP2 after the Overt Speech stage. In the final evaluation Kim indicated that the Overt Speech stage was important in his development of essay writing and gave it 4 out of 5 points. Kim seems to need laughter and playful subversion of the seriousness of the academic task to learn. This is not necessarily a bad thing. This kind of bonding may enable him to risk using the educated discourse in his discussion without appearing too keen, or geeky, to do well. It is a risky step because the terminology is unfamiliar at first, and as a young person, he does not want to appear foolish. At the end of SWP 2 Kim does engage with the writing task, it may be that this humour provides him with a safety net in bridging the transition between every-day and educated discourse.

4.3.3 Case Study Three: Monika

4.3.3.1.1 Background

Monika was a white non British female, originally from Hungary, with English as an additional language. She lived with both parents in the town surrounding WS school and had one brother and one sister, both younger than herself. I have not recorded the number of years that Monika had lived in the UK, but she was present in Year 6 to complete her SATs and she achieved a high level 5a for English. In year 7 Monika's reading age was tested using the: WRAT 4 – Wide Range Achievement Test. This test assessed her reading age to be 13.3; this was above her school age, which was 11 years old at the time of the test. She was therefore predicted to gain a Higher EGT – End Grade Target of A*, A or B.

During Year 7 and Year 8, Monika achieved grade 1 for ATL and GP in English lessons in every term. In History, she achieved grade 1 for ATL in all terms, but in Year 8, her GP was recorded as a grade 2, showing good progress, but not excellent progress. (Refer to Claire's Case Study section 4.3.1).

The first sound-bite I recorded showed she had a vague understanding of an essay, but not any specific notion of the elements within an argument essay. Monika recorded her sound bite with Naruto and Alexa. Monika said: 'An essay is a longer detailed piece of writing about a particular subject, sometimes a specific number of words and paragraphs is required.'. The sound bite recorded by these three students was not, in this instance a discussion, but a series of three statements. They use some vague educated discourse, but it is not specific to an English argument essay.

4.3.3.1.2 Baseline Essay

The title for the essay: *"Children of school age should not be working at all. They should be focused on their schoolwork and helpful to their parents. Working for money comes later." The councillor will take part in a debate at your school. Write a speech in which you argue your point of view in response of this statement.*

Monika did follow my advice and wrote a plan for her essay. She wrote a series of sub-headings; each of these sub-headings had a sentence for each section:

- Paragraph 1: Introduce yourself at the start of the speech, and the question / statement you are going to be discussing.

- Paragraph 2: Say whether you agree with the counsellor or not and add at least two reasons.
- Paragraph 3: Add another reason why you agree with the counsellor. Explain this point of view in a lot of detail.
- Paragraph 4; Point out why someone might disagree with the counsellor and a situation where it might change.
- Paragraph 5: Conclude your thoughts and feelings on the discussion.

In my research journal, I noted that, at the start of this lesson, I told the students to try to write five paragraphs. I also noted that a few students asked questions, which I answered, but, unfortunately, I did not comment on what the questions or answers were, nor have I commented on whether Monika asked me any questions. Monika's essay plan looks well structured, as if perhaps I did inform the class or her about the structure of the essay, she obviously heard me say I wanted five paragraphs. She must also be using her past knowledge of essay writing in her planning stage. Despite this promising plan, however, Monika fails to deliver in her essay writing and only achieves 32 points, this was lower than Kim or Claire, placing her 20th in a class of 23.

Here is the text of her baseline essay:

> 'Hello, my name is Monika, and I'm going to be pointing out my thoughts and feelings on the question, students: school or work. I have viewpoints that agree and disagree with the councillor, which I will be explaining in this essay. I hope you can agree or understand what I think and why I think that. With respect for all other opinions, I start with my first thoughts.
>
> P2:
>
> School children are called "school children" for a reason. They belong in a friendly, safe environment that they can learn from, as their brains are still developing. One reason I believe children under the age of 16 shouldn't work is because they can't always work as fast or as well as an adult. Children learn faster than adults, so it is vital for them to keep learning for as long as possible before they begin work. The better the student can do in subjects the more chance there is of them getting a good job later in life.
>
> Another reason as to why children should stay in school is due to them being so young. Adults may take advantage of that and give them an unfair wage, consequently having the

student go home with an almost empty pocket. Studies show most working students get the minimum wage.'

Monika writes a suitable introduction and shows some coherence with the use of one discourse marker 'another reason.' She also groups her ideas together within the three paragraphs (although she had planned to write five paragraphs). She attempts to justify her argument with some examples, rather than substantive evidence, to try to support her various points. (Refer to Appendix 8.6.10) Although Monika is trying to argue that students should not work, she uses several different reasons, which are not cogent or expanded upon. Furthermore, she is not persuasive enough at the start of her essay, rather she admits respect for all opinions, 'with respect for all other opinions,' and she doesn't create a serious counter argument. An additional problem Monika encountered was that of time restriction, she spent time doing her elongated plan rather than using the time to start writing and subsequently was unable to include a conclusion.

In her post essay questionnaire, Monika said that she felt, 'OK', about writing an essay without scaffold and that she had used her 'own brain, the Lit Sheet and past knowledge' (The Lit Sheet was an A4 card with writing tips on it) to help her complete the essay. She reported that her past knowledge consisted of six essays that she had written since her time at WS School. When asked to comment on what she could do to improve her essay writing skills, having been given time to review my marks on the Essay Criteria Assessment Tool. Monika wrote: 'Discourse markers to indicate progression of essay and show the links or logic between the paragraphs heading to your conclusion.' This shows the beginnings of meta-cognition of essay writing. She has identified how she could improve her writing. In assessing her own work and learning Monika develops 'new educational-cognitive motives and promotes an interest in the content techniques and the process of learning.' (Markova, 1990, p.281) Markova found that if the students self-evaluated, it reinforced their attitude to learning and increased their motivation. This certainly seems reflected in Monika.

4.3.3.1.3 Stepwise Procedure One

The key to the Stepwise Procedure is the Orientating Chart. (Gal'perin, P., 1989 (1974); Haenen, 1996) Monika worked with Alexa and Naruto to develop their Orientating Chart.

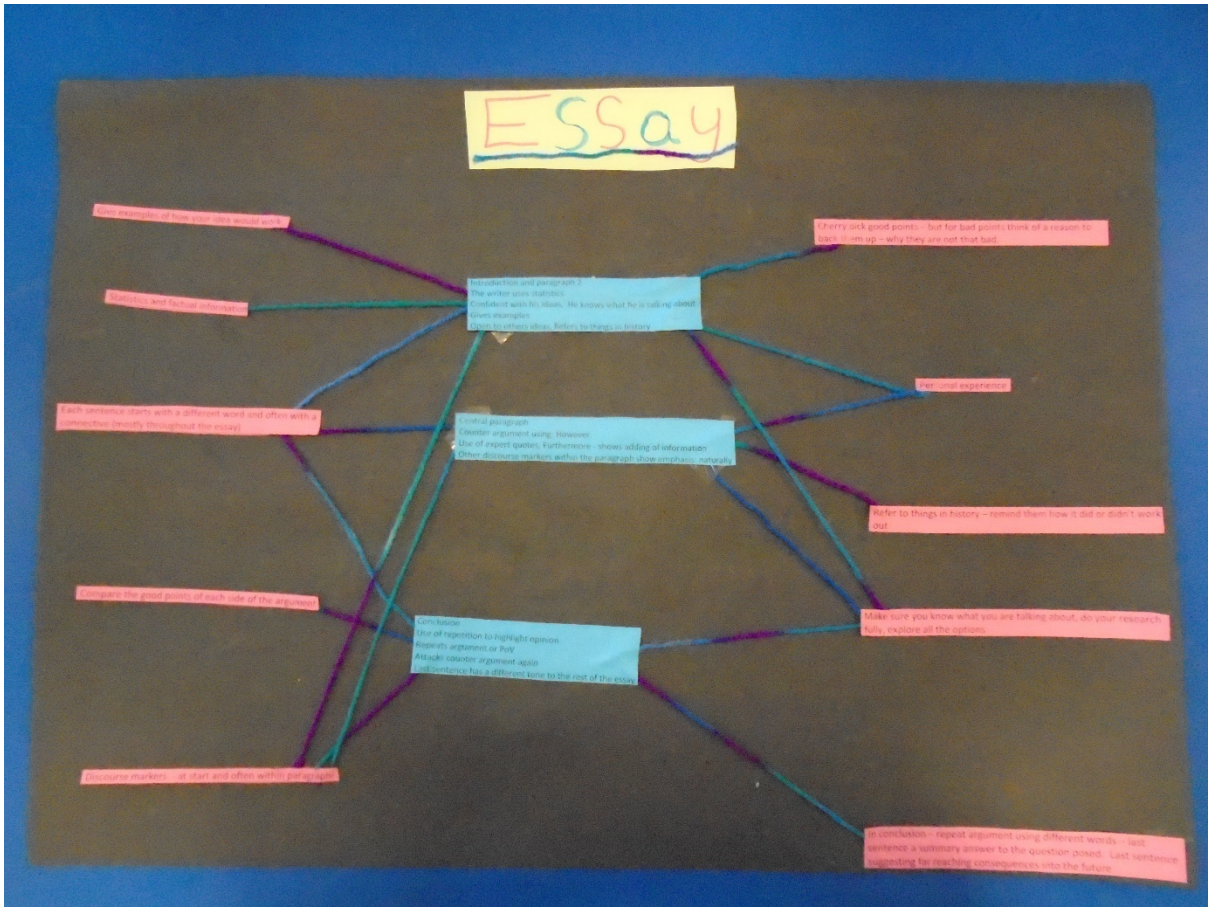


Figure 56: Orientating Chart developed by Monika, Alexa and Natuto.

Their orientating chart (refer to figure 66) incorporated the use of string to connect the different elements together, sometimes with multiple connections. They cut out the two sheets of paper that had essay writing elements on them and stuck them at different points on the paper. The three blue pieces of paper are stuck in chronological essay writing order: the top one says: introduction and paragraph 2. The second one says: central paragraphs. The third says: conclusion. The pink pieces of paper are the various elements that might appear at those different points, such as 'cherry pick the good points', 'use statistics and facts'. This chart and its complicated web of connections highlights the complex skills needed for essay writing and these students burgeoning metacognition of essay writing.

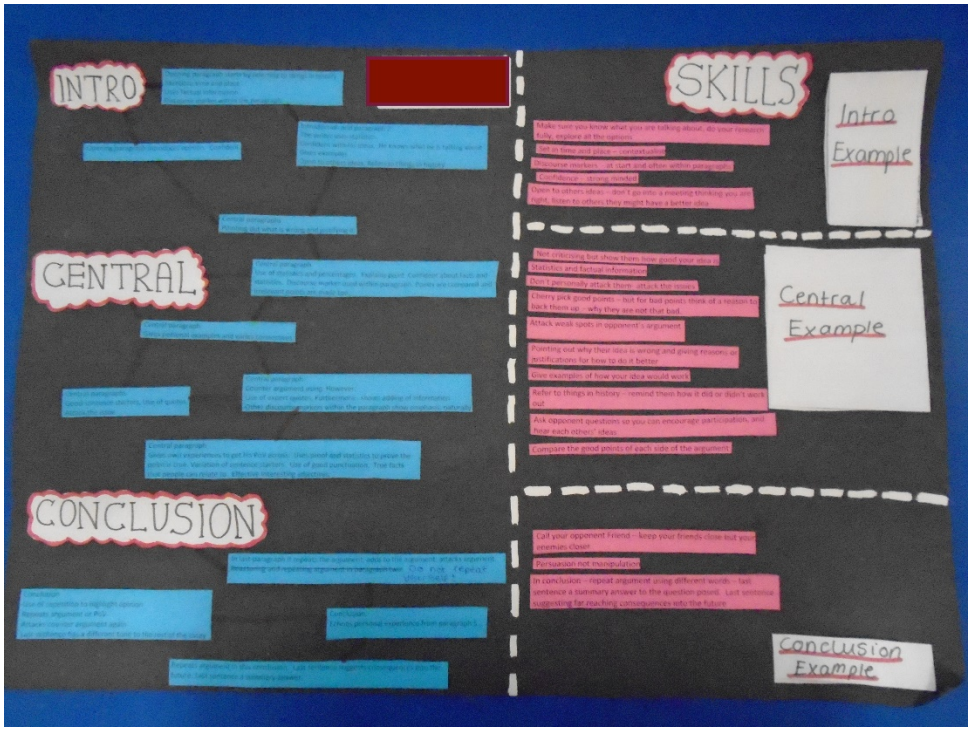


Figure 57: Vanessa and Jessie's Orientating Chart. SWP 1

When Monika and her group were given an opportunity to look at other people's orientating charts and evaluate them for purpose. Monika and her group chose Vanessa and Jessie's chart. (Refer to figure 67 above). They wrote: 'As a table we thought that Vanessa and Jessie's chart would help us the most when writing an essay because it's easy to follow and it's laid out clearly. Also, it is straight forward as well as looking aesthetically pleasing.' This chart is completely different to the complex web Monika created with Naruto in the first instance. She has chosen something clearer and straightforward, even though essay writing is complex and Gal'perin advocated a chart that 'terrible to look at' (Gal'perin, P., 1989 (1974), p.77). Monika was keen to improve and said she referred to the Orientating Chart a lot during the time allocated to write SWP 1 essay. She also said she referred to her plan, as written below in the text, sometimes and the information sheet about apprentices, once or twice.

4.3.3.1.4 Stepwise Procedure One essay

The Stepwise Procedure One essay was entitled: *Students who want to do practical jobs in the future should be allowed to start apprenticeships at the age of 14 years.* I encouraged the students to make a plan for their essays for SWP1; Monika spent some time planning. She wrote out sub-headings 'FOR' and 'AGAINST'. Under these headings she wrote a sentence for each that countered the other assertion.

- For: It is easier for the skills to develop if the students start apprenticeships earlier on
- Against: They might decide to do something else after finishing the apprenticeship making them not have enough GCSE
- For: Have experience for later jobs
- Against: Too much for the student to handle; a job and an education
- For: Get a head start
- Against: Might decide to so something else

From this plan it appears obvious that Monika is trying to ensure she includes the counter argument, which she failed to do in her baseline essay.

Here is Monika's text for that essay.

> 'In the present years, schools have been preparing students for higher learning, to let them have a chance to go to college or university and pursue their dream job. But all students have different skills and goals in life, which brings up the question: should students who want to do more practical jobs be allowed to start apprenticeships at the age of 14? This would be beneficial for some people but would introduce other problems. Consequently, I do not think students should start apprenticeships at the age of 14 regardless of what they want to do later in life.
>
> At the age of 14, students start maturing and being able to do much more for themselves. Nevertheless, having to deal with job-like circumstances as well as focusing on school would put a lot of pressure on the student. How are they able to finish their homework, when they are needed at their work-place to help with a task? Although having a job at this age may develop new skills for their student, other mandatory skills they would learn in school would be forgotten. Furthermore, how would they study for their GCSEs, when they had work-related problems to worry about as well?
>
> According to the latest statistics, over 40% of students who start studying a particular subject change their minds within the first two years. Starting an apprenticeship would mean that they didn't have time to compete their GCSEs which would leave a significant gap in the student's knowledge. Therefore, if after the student finished the apprenticeship, they decided that it's not what they wanted for a job, they would be lacking the experience for other jobs.

> Indeed, doing an apprenticeship would give the student a head start, but what about their other skills? It is important to have those extra skills to fall back on if their first job didn't work out, or they changed their minds. I as a child changed my ideas for a future job regularly, from an artist to an astronaut to an archaeologist, marine biologist, interior designer and many other things in between. What everyone wants to do varies, but it is important for everyone to be able to pursue their dreams.'

Monika made substantial progress in SWP 1 essay compared to her baseline essay. Comparing the areas on the ECAT in which she improved, there were only three other students who had improved as much as her, indicating her burgeoning meta-cognition. (Refer to Appendix 8.6.11)

Her language is much more precise and succinct using words such as: 'indeed' and 'consequently'. She also uses discourse markers to indicate the direction of her argument, 'furthermore', 'although,' 'therefore'. In addition, she includes a range of effective linguistic devices to enhance her points and ideas, '40%', 'I as a child', as well as some rhetorical questions.

In her post essay questionnaire, she wrote that she was very pleased with how the orientating chart had helped her. She commented that: 'The blue side gave me ideas of what to add' and that 'I wouldn't change anything.' I noticed that she had customised the orientating chart a little using arrows to show the flow of the structure. For example, in the Introduction section, she had written: '1-2P' and on the central section she had written : '2-4P'. Adjacent to the Conclusion section: '1P'. In addition, Monika had added a fully complete discourse marker grid. (Refer to Claire's Case study section 4.3.1). When asked, on the post essay questionnaire, whether she had been frustrated about anything, she mentioned the time constraints: 'I didn't have enough time and I only wrote 4 paragraphs.'

Monika's reflection of her essay writing process reveals a growing metacognition of structure and elements associated with essay writing. This self-assessment show maturity and clear understanding of her essay writing development. Monika wrote:

> 'I should add the conclusion (write faster). Use key words to maintain point of view. I think I have really improved in essay writing since we wrote the baseline essay. In both of them I got a cross in the two conclusion boxes which is because I didn't write fast enough to be able to get to the conclusion. The orientating chart really helped when writing the essay. I don't think I need to change it in any way, and I don't need anything else except the information sheet to help me. '

However, her developing educated discourse is not quite so developed. Here is the transcript of the sound-bite that she, Alexa and Naruto recorded after writing SWP 1:

> Alexa: 'An essay is where you summarise a certain topic and give your point of view.'
>
> Monika: 'An essay is when you discuss.'
>
> Naruto: 'I think an essay is an answer or an opinion to a question or statement … It's a lot of effort and your hand hurts.'

One might argue that perhaps it is her EAL hampering her ability to get to grips with the educated discourse, as it can take between five to seven years to become proficient in English to a degree of academic proficiency. Demie's research shows a strong correlation between English 'the stage of fluency in English and academic achievement'. (Demie, 2013, p.59) Although she is improving in academic writing of an argument essay, it is perhaps her educated discourse which is not so well defined. But at this stage her competence at educated discourse is similar to the other students in my case studies as I discuss later.

4.3.3.1.5 Stepwise Procedure Two

Before starting the essay in Stepwise Procedure Two I focused on the Overt Speech Stage. (Refer to Methodology Chapter section 3.3.4).

I have included a transcribed section of their recording which shows the students developing educated discourse about essay writing. This group were very focused on filling in the chart I gave them and completing every box.

> Lisa: 'What do we want in the introduction'
>
> Monika: 'I put [laughing] I put umm, refer to things in history, time and place and introduce opinion … '
>
> [Later …]
>
> Monika: 'Yeah, so I didn't put, I put, discourse markers in these, in this bit, so discourse markers and key words in every paragraph and like, a bunch of active verbs …'
>
> [Later …]
>
> Lisa: 'Well, … so what did you put for the counter argument?'
>
> Monika: 'Well, I put, point out what is wrong and justify it, a counter argument …'
>
> Lisa: 'Jay, what did you put?'

Jay: 'I put attack the weak points and justify why they are wrong, like …'

Monika: 'Ok, so, err …'

Jay: 'Then you've also got, like, the sentence starters, and the, like, some people might think, and, however this is an easy mantra.'

This extract shows the students using educated discourse about argument essays in a competent manner. They are trying to fill in the chart I had given them, *refer to Methodology Chapter section*, and even though they are referring to phrases or words they themselves have put in their personal charts, they are using the educated terms and they all appear to understand these terms. However, some section of their discussion shows less confidence.

Monika: 'Did you put anything for?'

Zoe: 'No.'

Lisa: 'No, what did you put?'

Monika: 'I put, even though this creates …blah blah blah… there is also ... blah blah blah … cos' it was on the board and I just copied.' [laughs]

It is not obvious whether Monika understands what she has written and said to the group. She adds that, 'it was on the board, so I copied' as perhaps a justification for not really understanding what this phrase means. It occurs at 11.38 minutes through the Overt Speech Stage and appears to be included in what they are terming the 'development paragraph'. The others in the group do not question it. Perhaps, the justification that it was 'on the board' is enough for the students at this stage to accept it and include it. The fact that Monika laughs, suggests her lack of confidence or her need to displace her role as leader or person of knowing. She doesn't want to appear foolish in front of her peers, nor does she want to appear the geeky one. Her laughter and the phrase 'I just copied' belie her clear meta-cognition of essay writing.

At another point in the recorded talk. Lisa admits to including something that her friend Robin told her.

Monika: 'What did you put for suitable vocab?'

Lisa: 'I put varied sentences and emotive language'

Monika: 'Yeah, I put emotive language'

Lisa: 'Yeah, well, that's what Robin told me to put. '

This seems to highlight the students lack of confidence in their own ability to understand the essay writing process or their deflection in not wanting to appear that they understand more than the others in the group.

N MONIKA BA 2

Paragraph	Elements to include	Suitable vocabulary	Sentence starters
Introduction	•Refer to things in history •Time and place •Introduce opinion	Equally, Likewise, Due to, Certainly, Indeed.	
Development paragraph	•Statistics •Facts, make sure your information is correct.		Not only does this suggest... it also implies...
Personal experience paragraph	•Use personal examples related to the problem. •Attack issue	For instance, Further more, Just as, Indeed	Even though this creates a... there is also...
Development paragraph	•Compare points •Maybe continue explaining personal experience •Show irrelevant point	As well as, Equally, In addition	
Counter argument paragraph	•Point out what is wrong and justify •Counter arguement	But, However, Nevertheless, Despite, On the other hand, Clearly	Some people might think... However, this is an easy mantra... I don't deny that...
Development paragraph	•True facts people can relate to. •Weak spots in opposing arguement	Almost, In a sense, Necessarily	
Development paragraph [maybe add]	•Any other points that could help •Persuasion •Introduce conclusion		
Conclusion	•Repeat arguement •Echo personal experience •Consequences in the future	Above all, Despite, Therefore, Consequently, Significantly	

Other elements to remember	
DISCOURSE MARKERS!!!	Key words in every paragraph.
Use active verbs. Seems, Evokes, Exhibits, Implies, Argues, Denotes, Explains, Reinforces, Clarifies, Demonstrates, Exaggerates, Signifies, Connects, Displays, Indicates, Supports, Criticises, Highlights, Portrays	

Figure 58: Monika's Orientating Chart for SWP 2 essay.

Monika's Orientating chart, (figure 69 above), shows a lot of detail and the words and phrases she wants to use within her essay. This chart supports Monika's own comments on how she could improve her essay writing. Monika has written 'Key words in every paragraph' in large lettering at the bottom, which was the second point on her reflection for improvement, as she had written, 'Use key words to maintain point of view'. Another area Monika had mentioned in her reflection for improvement, was her concern about finishing her essay so that she could write a conclusion. Monika is clearly understanding ways in which she can improve. Her metacognition is continuing to improve and develop. She ensures the details she needs are on her orientating chart and that she includes it in her essay. On her orientating chart Monika has highlighted the last section paragraph sections in blue and placed crosses at the corners.

4.3.3.1.6 Stepwise Procedure Two Essay

The essay title for SWP 2 essay was: Should we keep animals in Zoos? Here is the text that Monika wrote in response to that essay title:

> 'In past years, zoos have increased more and more in popularity. In fact, studies show how zoos revenues have significantly increased in just ten years they found newer and more interesting species to put on display. Certainly, this meant that zoos made more money; were able to upgrade their attractions; and people were more willing to pay to get in. For many years, people have also believed that zoos are good for saving endangered species. But is it really good for the animals to have thousands of eyes staring at them every day of their lives?
>
> In particular, my personal experience with zoos has showed that animals are not happy being enclosed. Once, at a popular zoo in Hungary, I was looking at a gorilla, when all of a sudden it turned around angrily and ignored everyone. The other people at the exhibit laughed at the gorilla, but I felt a touch of pity for the unfortunate creature. It was clearly in distress – is this really how animals should be treated?
>
> On the other hand, there is evidence that undoubtedly states that zoos have saved species by using helpful breeding programmes to save certain animals from the brink of extinction. Species like the Arabian Oryx, the Golden Lion Tamarin and the Puerto Rican parrot have been saved by breeding them and retuning them to the wild. This example demonstrates how zoos can justify keeping animals in cages if they are treated well and returned to the wild after they are not facing extinction.

> Some people might think that zoos are horrible places and nothing can justify taking away an innocent animal from its parents. However, this is an easy mantra. I don't deny that there are zoos treating animals in a bad way, but the better zoos can contribute to scientific research as well as helping to breed endangered animals.
>
> In conclusion, I think zoos should only be kept for specific scientific research and to have breeding programs for threatened species. Undoubtedly, some people would disagree therefore I also think they should be open to the public for a few days a year so more people could be educated about how animals' lives and habitats are threatened. If more people know about how they can help wildlife, perhaps there won't be so many unhappy and endangered animals in the future.'

In this SWP2 essay, Monika has continued her upward trend of improvement and understanding. (Refer to Appendix 8.6.12) Using the ECAT only two other students, Naruto and Bean, displayed similar skills. In the post essay questionnaire, Monika commented that she was pleased about: 'the suggested vocabulary and the sentence starters helped a lot." And there was "nothing" she was frustrated about. She also commented that she used her orientating chart a lot and referred to information she had gathered about Zoos. *See Methodology Chapter for more detail.* When asked to comment on how she could improve, Monika wrote: 'I could improve by maintaining my PoV throughout the essay. I could practise making my tone sound more confident.' This shows her developing confidence and understanding of her achievement and reflection on my marks on the Essay Criteria Assessment Tool.

The sound-bite recorded after the writing of SWP 2 essay, reveals a much developed educated discourse. Monika recorded ideas with Ferry and Alexa.

> Monika: 'You are going to need to use discourse markers with paragraphs to make it look good.'
>
> Alexa: 'You also need to use key words to make it sound more professional.'
>
> Ferry: 'You can also use Point of view to make your essay better.'
>
> Monika: 'Err, umm, to make your essay more factual you can use statistics.'
>
> Alexa: 'You also need to include a counter argument paragraph.'
>
> Monika: 'And you are going to need to make your point of view clear with, by, including some personal experiences.'

Ferry: 'You can also use the rule of three to make your essay better.'

Monika: 'You can also include…'

Ferry: 'Don't forget full stops…'

Monika: (laughs) '…You can use development paragraphs to develop your ideas further.'

Their use of essay language, devices and their understanding of how these elements effect the essay. 'to make your essay more factual you can use statistics' and 'key words make it sound more professional' shows their growing confidence and metacognition with the essay writing process.

Monika's improvement in essay writing, and her focused use of the orientating chart as a central help for writing the essays, supports Gal'perin's theory. The Stepwise Procedure has become for Monika a necessary 'cognitive map for an orientating basis' (Haenen, 1996, p.134). Gal'perin believed that if the Orientating Stage were taught in a slow and detailed manner, in this case over the period of six months, then, 'it becomes clear to the learner how the operations involved are connected to changes in the material'. (Haenen, 1996, p.134) Monika highlights, several times, her focus and use of the Orientating chart, and as Gal'perin said it should become a, 'learner-proof cheat sheet.' (Haenen, 1996, p.135) Furthermore, Monika developed in her academic essay writing ability and the metacognition of essay writing. This supports both Hewitt (2012) and Mercer (1995). Hewitt comments that 'Vygotskian principle that a child learns when guided to higher levels of cognitive development by talk and experience shared with adults and other more able peers.'(Hewitt, 2012, p.403) Monika was guided through the Stepwise Procedure by me, as teacher, and the support of other students, who at first, were more able to write essays than she. By promoting the use of educated discourse and scaffolding it through Gal'perin's Stepwise Procedure, Monika has been 'enabled to understand and to use [educated discourse, in order to] become educated.' (Mercer, N., 1995, p.85)

The orientating chart, for Monika, is a kind of shared artefact, it is a tool to guide the development of essay writing negotiated collectively among the members of the group. They check their tentative understandings out with one another. It is not simply an *individual* 'cheat sheet'. It is a social tool that enables them to collaborate. In reflecting her ideas and understanding within the group, Monika can better understand herself.

4.4 SUMMARY

My research questions questioned whether using Gal'perin's Theory of Systematic formation of actions and concepts and his Stepwise Procedure, including the SCOBA and orientating chart, could enable students to develop their essay writing skills and develop their educated discourse for essay writing. In general, all the students made progress to some degree or other, showing that Gal'perin's Stepwise Procedure enabled them to improve their essay writing ability and develop educated discourse for essay writing. However, my case studies show some specific impact on some individuals. For example, Claire appeared more successful in developing her essay writing ability than using educated discourse. This is reflected in Gal'perin's study of language development. He notes that 'language is organically fused on a level of social relations [and] the depiction of things that elicits in the listener a certain understanding of these things' (Gal'perin, P., Ia., 1992 (1977), p.86). Claire's social relations were not focused on English Language lessons, but her family and peer group; this was merely an observation that she only spent four hours a week in English lessons with perhaps one hour of English homework. The educated discourse she encountered during this period of research in the classroom has been different to what she would normally encounter with her family or peers. (Mercer, N., 1995) She appears more uncomfortable using educated discourse but has managed to transpose the elements of essay argument into writing. Claire perhaps needs more encouragement to use educated discourse if she is going 'to move to a higher level of abstraction in [her] lines of reasoning' (Brevik, Fosse and Rødnes, 2014, p.54).

Kim's progress firstly portrays the importance of the orientating chart within the Stepwise Procedure. He made more progress with his essay in SWP 2 when he looked at and used his Orientating Chart, in his words: 'a lot'. As Gal'perin emphasized, the orientating chart made 'the understanding of the task and the formation of fully fledged knowledge and abilities much easier'. (Gal'perin, P., 1989 (1974), p.72). Kim's case study also highlights the importance of the Overt Speech Stage. The observations I made of his chattiness and lack of focus perhaps made it easier for him to risk using educated discourse with his peers and avert attention from the fact he is using it. His change of interaction is marked between his SWP1 talk and his SWP2 talk. This improvement together with his improved essay in SWP2 confirm his developing meta-cognition, as Gal'perin wrote, 'a subject who is learning how to perform an action in speech and hence necessarily aloud for others to hear, is learning a relation to this form of the action from the standpoint of other people. When this relation becomes thoroughly assimilated it creates in him co-knowledge' (Gal'perin, P., 1989 (1957), p.53).

This ‘assimilation of co-knowledge’ is underlined in Monika’s case study. Her improvement seems centred on the orientating chart which became a sort of shared artefact, a social tool for collaboration. Her developing educated discourse ‘enabled her to understand and become educated’ (Mercer, N., 1995, p.85), guided and supported into to ‘higher levels of cognitive development by talk and experience’(Hewitt, 2012, p.403). She has developed into a leader in the group someone who the others use as a sounding board. It has given her ‘immanent power’ (Brevik, Fosse and Rødnes, 2014, p.54).

In this Chapter I have given an overview of my general Findings and a close detailed description of three students through my case studies of their development during the data collection period. In the next chapter entitled Discussion, I will specially explain and describe what I found out in relation to my two research questions.

5 DISCUSSION CHAPTER

In this chapter I discuss my findings in more detail relating them to my literature review and my theoretical framework. I have separated this into two main sections relating to my research questions:

> Research Question One:
> How might Gal'perin's Theory of Systematic formation of actions and concepts and his Stepwise Procedure, including the SCOBA and orientating chart, enable students in English Language lessons to develop their essay writing skills?

> Research Question Two:
> How might using Gal'perin's Theory of Systematic formation of actions and concepts and his Stepwise Procedure, including the SCOBA develop or contribute to a common educated discourse for English language essay development in a secondary school?

Firstly, I am prefacing the detailed discussion of my findings as they relate to my research questions with a brief summary of my overall findings. My study shows some evidence that Gal'perin's Stepwise Procedure, as a pedagogic method, can deepen students' meta-cognitive understanding of the essay as a genre of written text. Students changed from using written discourse based on surface features, such as word length and number of paragraphs, to using an educated discourse showing explicit understanding of the rhetorical demands of this form, such as point of view and counter-argument. This was demonstrated in practice by the ability of students to produce higher quality essays independently over the course of the intervention.

In addition, my research seems to point to the connection between the development of educated discourse, reinforced through social interaction and mediation, of not only teacher but also peers, particularly in the Overt Speech Stage, and metacognition of the essay writing process. As Haenen (1996) points out 'Higher psychological functions have their roots in social interaction and are formed as a result of internalization.' (Haenen, 1996, p.73)

As a practising teacher researching my own class, I was not the passive object researcher, I was as Berkovic et al, say, 'aligning my self-interests with my research' (Berkovic et al., 2020, p.1). This insider position gave me some knowledge of the school and the students that an outsider would not be privy to, but also meant that the progression of the students in my class reflected on me, and as any teacher would, I wanted my class to improve. I attempted to remain as objective as possible, keeping a journal and noting events in a bracketing style, referring to my supervisor,

'interrogating my positionality' (Soedirgo and Glas, 2020, p.547) and being critically reflective. But as Winter said, 'Action research undermines the simple distinction between the researcher and the researched.' (Winter, 1998, p.362) Thus, my interpretations are intrinsically woven into my practice and since this research was essentially collaborative, the interpretations are of a collaborative nature, highlighting the communal aspect of this research. I collaborated with my colleagues to create the ECAT, I collaborated with the students in making and developing the orientating charts which all resonates with Vygotsky's sociocultural theory, which, in turn, were extrapolated by Gal'perin into his series of interrelated actions in his Stepwise Procedure. Gal'perin's Stepwise procedure necessitated repetitive cycles, not just lending itself to action research but meaning action research is the inevitable choice. And this enabled Gal'perin's Stepwise procedure to be seen in its constituent parts, following as closely to his original model as possible in a live, timebound class of a practising teacher. The three case studies of Claire, Kim and Monika facilitated a deeper examination of how Gal'perin's Stepwise Procedure made a difference in their essay writing and their educated discourse. It would have been a difficult task to thoroughly analyse all 23 students. But the three case studies were a reflection of the 'extent to which the programme's stated objectives have been achieved'(Bassey, 1999, p.63). And this discussion will focus on how my research questions have been answered and as such the evidence from my case studies forms a backbone for this.

5.1 RESEARCH QUESTION ONE: ESSAY WRITING

> How might Gal'perin's Theory of Systematic formation of actions and concepts and his Stepwise Procedure, including the SCOBA and orientating chart, enable students in English Language lessons to develop their essay writing skills?

The differentials in achievement from the students' baseline essay score to the essay score in SWP2 showed that all the students in the class had made progress during my data collection period using Gal'perin's Stepwise Procedure.

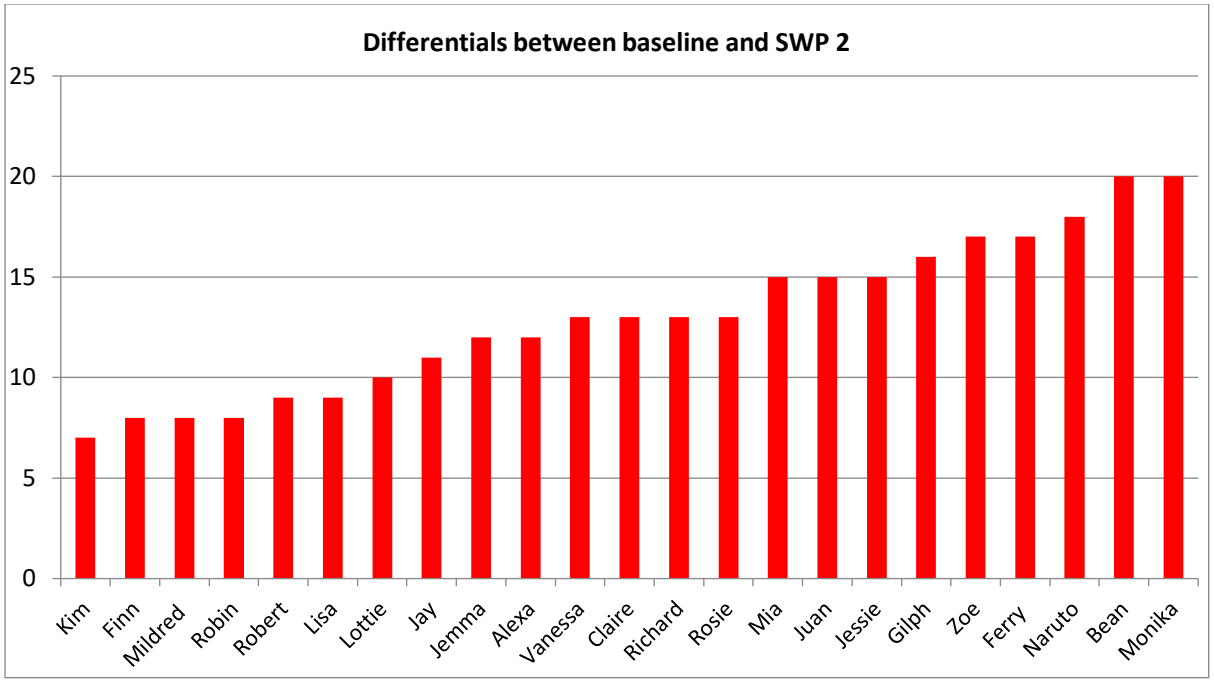


Figure 59: Graph showing the progress made by the students showing the differentials in essay scores comparing their baseline essay to their SWP2 essay. The maximum differential would have been 36.

Some students like Bean and Monika,(refer to figure 71 above) increased their score by 20 points. Monika's written discourse became much more precise and succinct, she used an increasing variety of discourse markers, a counter-argument, and a range of effective linguistic devices. Kim, as reported in the case study section, made some progress in his essay writing, using more sophisticated discourse markers and attempting to destroy the counter argument in his final SWP2 essay.

In this section, I will analyse how Gal'perin's Stepwise Procedure enabled students to develop their essay writing. I have divided it into three sections. I have chosen these sections because when asked in the final evaluation questionnaire which steps in Gal'perin's Stepwise Procedure had helped them the most, the students indicated that the top two steps were: The Orientating Stage including the Orientating chart; the Materialised Stage. I have included Motivation as my third discussion point as although it is, according to Gal'perin, a prerequisite, Gal'perin did not discuss it and thus I believe it needs some developed discussion to fill that gap.

- The full SCOBA including the Orientating Stage
- Materialised stage
- Motivation

5.1.1 The full SCOBA including the Orientating Chart

Gal'perin asserted that the orientating chart should 'form a picture of the circumstances, mapping out a plan of action', (Gal'perin, P., 1989 (1969), p.28) that would enable students to conduct a 'correct performance of the assignment' (Gal'perin, P., 1989 (1974), p.69). The SCOBA (Scheme of complete Orientating Basis of Actions) should be delivered 'in so much detail that it becomes clear to the learner how the operations involved are connected' (Haenen, 1996, p.135). In other words, if students are given an understanding of the expert outcome with explanations and detail that enable students to understand the process of working towards that outcome, they are more likely to achieve a better representation of that outcome. Just as in many recipe books there are not only instructional steps to making and baking a cake, but there are often images which show these steps and the outcome; this is similar to Gal'perin advocating student learning be conducted through his Stepwise Procedure.

Analysing the baseline essay showed me that students had an incomplete understanding of writing essays, despite the fact they had been educated in secondary school for two years and been taught how to write essays in English and History lessons. The students were used to being given scaffolding or point by point ideas for their essay writing, but always given by a teacher; two thirds of this class recalled being given some instruction, or scaffold to help them write past essays. Only two students thought they had not been given any help, in the form of scaffolds, to write essays in their experience at WS school. And three quarters of the class admitted some unease over writing the essay without a scaffold. The students' unease reflects their need or desire for a scaffold to enable them to produce a good outcome; it seems they felt vulnerable without a scaffold. But in relying upon the teacher to create the scaffold, some of the students became so reliant that they were uncomfortable writing an essay on their own without one. This was reinforced by the fact that during the baseline essay, 18 out of the 23 students in the class, made use of the resources I had left on their desks, such as a dictionary, a thesaurus and the Lit Help Sheet and over half of the students did not managed to conclude their baseline essay. This lack of confidence on the part of the students confirms Gal'perin's view: the student needs clear orientation, comprehension and understanding of the complete action and outcome, 'a picture of the circumstances', (Gal'perin, P., 1989 (1969), p.96). It follows that if the student has not understood this, then the action, in this case the execution of the essay, will take place with errors or in an incomplete manner.

The results of the baseline essay showed that these students were only fully competent in writing an introduction. This was particularly evidential in my case studies, where the three students, Kim, Claire and Monika, all scored top marks for writing an introduction with a focus on the theme and topic, according to the ECAT. The ECAT, however, also showed there were common areas of deficiency. For example, they did not score any marks for the following areas: write a paragraph that destroyed counter argument; write a sophisticated conclusion; or maintain their point of view using key words and phrases. Perhaps due to the lack of curriculum time devoted to essay writing, teachers of these three students, had concentrated on developing a clear introduction paragraph and had not been able, for whatever reasons, to work on the essay structure and development. It also highlights the lack of understanding of the essay as a whole, a holisitic view of the essay. Their past instruction on essay writing clearly had not been 'in so much detail that it becomes clear to the learner how the operations involved are connected' (Haenen, 1996, p.135).

Once the students had seen the Essay Criteria Assessment Tool, even before they had been privy to the SCOBA in its full guided, constructed and general nature, the students identified areas in which they needed to improve. For instance:

> Kim wrote: 'To improve I could use the baseline essay assessment to try to attempt every single one[of the criteria].'
>
> Claire wrote: 'I could improve by adding more punctuation and grammar. I needed to have more paragraphs and have more control of the order of my essay.'
>
> Monika wrote: 'Discourse markers to indicate progression of essay and show the links or logic between the paragraphs heading to your conclusion.'

In this sample, only Monika was able to pinpoint particular elements that she could improve upon and showed some understanding of the flow or structure of the essay. Kim made a very general sweeping statement: 'try to attempt every single one'; this broad sweeping statement shows his desire to improve, he wants to 'complete the task 'correctly' (Gal'perin, P., 1989 (1974), p.71), but lacks understanding of how to improve. Claire focuses on general English subject improvements such as punctuation, grammar and paragraphs. This also indicates a lack of understanding. It is harder to explain how you will improve in your essay if you do not understand the general requirements, and so Claire reverts to elements she understands, such as spelling, punctuation and grammar.

Gal'perin's model of scaffolding is one whereby the students create their own orientating chart or scaffold through a mediated process of working with a teacher or a more able peer. SWP 1

orientating chart was created in groups with the teacher, me, acting as a director of operations, by leading from the front with ideas of how they might do this, then as a support and resource by spending some time talking to each group as they developed their ideas. All the groups used the expert essay to help them break down the structure into section or parts 'that can be easily followed and will ensure the rationality of the action' (Gal'perin, P., 1989 (1974), p.73). The process of creating their orientating chart hinged on their understanding of the structure of the expert essay. Many of the students even stuck bits from the expert essay onto their charts to help them visualise and understand. This was seen, for example, in the charts designed by the following students: Claire and Mildred; Richard, Jay and Jemma; Robert and Lottie; Vanessa and Jessie. As Robin said: 'Looking at the structure of the essay [helped me in] understanding the different elements in each paragraph '.

In this first orientating chart construction, many created quite complicated charts. The chart created by Kim, Gilph and Robert was non-chronological and appeared : 'terrible to look at' (Gal'perin, P., 1992 (1978), p.77). (Refer to The Appendices section 8.4 to view the full variety of these cahrts, including Gilph, Kim and Robert's chart). Gal'perin thought that the orientating chart had to be complicated in order for it to contain everything that the student needed to create a correct outcome. Kim, Gilph and Robert also added a lot of their own opinions and notes around the sheet: 'Use proof and repeat stats to get it into your readers head that your argument is good'. 'Prove why your point is good'. 'Justify your point using personal experience'. Similarly, Mildred and Claire added their own points to the charts. They wrote them in boxes entitled: 'extra information'. 'Make sure you have made as many good or bad points as possible to both sides of the argument.' This type of extra information, that both pairs had added and stuck onto their charts, highlights a desire to include everything necessary for the essay writing process and a deeper meta-cognition of the complexity of the essay writing process.

Other students like Monika, Alexa and Naruto developed their Orientating Chart using string to connect the different elements together, sometimes with multiple connections. They cut out the two sheets of paper that had essay writing elements on them and stuck them at different points on the paper. Again, this underlines these students burgeoning understanding of the complex skills within essay writing.

The students agreed that the orientating chart helped them, and provided the most success in reaching their goal of writing an essay like an expert; the orientating charts proved to be, ' a 'key' and 'a tool of action' and a 'cheat sheet'. (Haenen, 1996, p.135). For example, students commented:

Bean: 'Using the orientating chart [helped me] to write my own essay because it taught me the structure.'

Richard: 'Using the expert essay [helped me] to make an orientating chart.'

Jessie: 'Making the orientating chart and looking at the expert essay really made us think about our own essay.'

Zoe: 'Looking and evaluating the expert essay helped me because it gave me an idea of what my essay was supposed to look like.'

Many of the students had developed fairly complicated looking charts which were perhaps in Gal'perin's words, 'terrible to look at' (Gal'perin, P., 1992 (1978), p.77) and of which Gal'perin might have been proud. However, when they were given the opportunity to choose one of the chart, to help them write their SWP 1 essay, more than half chose a chart designed by their peers that was clear and easy to follow. Robin commented: 'Vanessa and Jessie's chart is laid out clearly with examples and the sections split into different parts.' According to Monika's group, it was an 'easy to follow … laid out clearly … straight forward …[and] … aesthetically pleasing. (Refer to The Appendices section 8.4).

It seems that students opted for something that was similar to what they had been used to being given by their teacher in the past. Vanessa and Jessie's Chart was clear, sectioned, and sequenced. But those who used it didn't necessarily improve. In the top five improvers, for SWP1, only Monika, Zoe and Naruto had used this chart, while all five at the bottom of the leader-board, had used the chart. It is worth reiterating that three of these students did not do as well as in their baseline essay, namely Mia, Lottie, Mildred, while Claire and Vanessa, who had created this chart, got the same score as in their baseline essay.

Despite the chart appearing clear and easy to follow with lots of examples and sections to guide the student, it appears, at first, that it did not fulfil several of the objectives set out by Gal'perin. Gal'perin writes 'the subsystem [on the orientating chart] of elucidations and prescriptions for the projected structure of an action is made complete enough so that the pupils…can correctly carry out the new assignment the very first time and every time thereafter.' (Gal'perin, P., 1989 (1974), p.70). Thus, one might conclude that the orientating chart was incomplete or not complete enough for all students. There are several extenuating factors to consider at this point. Firstly, four of these bottom five students went on a school trip to Germany the week before writing SWP1 essay. They missed the Overt Speech Stage for SWP1 where the class was put into groups to talk through writing an essay. Secondly, I made a note in my research journal that Mia

was particularly disengaged during the writing of SWP1. I have written: 'Mia left to use toilet for 4 mins. Mia continued to look unengaged for the whole lesson. I will ask her at the end what was up.' I subsequently spoke to her tutor who dealt with it as a pastoral matter. Mia did not complete an evaluation questionnaire for this essay, so I do not have her comments on the process.

It is interesting that the other four students indicated that they did not use the orientating chart very much while writing their essay. Claire, Vanessa and Lottie indicated they looked at it a middling amount, indicting a score of 3 out of 5, while Mildred indicated that she only briefly looked at it, indicating a score of 2 out of 5. This underlines how these students did not use the Orientating chart as ' a 'key' and 'a tool of action' and a 'cheat sheet'. (Haenen, 1996, p.135), as Gal'perin might have expected them to. It is obvious that it is not the type of chart that the students use which is key, but their reliance or use of it during the essay writing process. However, rather than stating that they would use the chart more in the next essay, all three apportion some blame to the charts incompleteness:

> Claire: 'There could have been some ways on how to add to your essay without repeating yourself and added discourse markers.'
>
> Vanessa: 'Separate each sentence and not have loads of sentences in one box.'
>
> Lottie: 'Maybe a bit of an essay and add a bit of an essay on there.'

However, Mildred said there was not anything she would change and that there was nothing else she wanted on the chart. This possibly demonstrates Mildred's less developed understanding of the essay writing process. She shows a passivity towards the orientating chart and an inability to engage with the metacognitive process of her essay writing. Lottie commented that she wanted 'a bit of essay' on the orientating chart, and yet that is exactly what was on Vanessa and Jessie's orientating chart, highlighting the fact that Lottie had failed to examine the chart she had chosen to use. Vanessa's concern seems to be mostly to do with layout. She wanted to separate the sentences so she could see them more clearly, suggesting she felt there was too much information in too small a space. Claire's comment is mostly to do with idea to write about 'adding to your essay without repeating yourself' reveals her lack of ideas about the issue she is writing about. And this was not the purpose of the orientating chart.

This evidence shows a strong correlation between the students' meta-cognition of the essay writing process and their use of the orientating chart. One could argue that the four students who were using this particular orientating chart, but had not created it, were at a disadvantage as they had not used meta-cognitive processes to put together and although it 'looked aesthetically

pleasing' it lacked their own thought process about the essay writing process. One could reason that these students did not understand it as they had not made it, however, Vanessa failed, at this point, to make any progress either, even though she was using her own chart. Any chart that allowed errors was referred to as 'unstable' according to Haenen (Haenen, 1996, p.153). The results of SWP1 indicated to me that the students did not have a complete orientating chart. The orientating stage had not included enough 'elucidations and prescriptions' (Gal'perin, P., 1989 (1974), p.70) it was 'unstable' and therefore led to the conclusion that many were unable to create an essay like an expert.

Reflecting upon the students desire for an 'aesthetically pleasing' (Monika) and 'clearly laid out' (Robin) orientating chart, I made the decision not to pursue something 'terrible to look at' (Gal'perin, P., 1992 (1978), p.77) but to develop a clear and easy orientating chart for the SWP2. Claire had pointed out that the reasons she chose to use Vanessa and Jessie's chart was that: '[it] would be very easy to work on and use'. According to Gal'perin, it was more important that the students understood the varied 'elucidations and prescriptions' (Gal'perin, P., 1989 (1974), p.70) on the chart, if they were to write an essay in the style of an expert that was without errors.

> 'We regard each error as a problem, that of finding some cue or point of references that will enable a subject not to make this mistake; the reconstruction of these cues continues until, together, they enable the subject, who has the necessary preliminary knowledge and abilities, but is unable to carry out the new action, to perform the new action correctly the first time.' (Haenen, 1996, p.29).

To facilitate this, I created a template for the orientating chart. This was a difficult decision. On the one hand, I was concerned about imposing my own form onto the students, perhaps limiting their choice and undermining their burgeoning meta-cognition. On the other hand, I wanted the orientating chart to be a kind of 'cognitive map for an orientating basis' (Haenen, 1996, p.134). In order to mitigate against my intervention of a whole class template, I did not populate it, it was merely an empty frame which I ensured was filled with their own words and phrases individually and during the Overt Speech, when I made sure that each small group had a more able peer to mediate for them. Thus, the orientating chart for SWP2 was created collaboratively by student and peer mediator.

This orientating chart template proved more successful for the students. More students achieved a better score for their essay against the ECAT, and all the students made progress after SWP2. One might argue that the chart was a more successful collaboration between mediator and student. I had indicated the various elements that needed to be populated; a more able peer had

made suggestions within the working groups when they discussed and populated their orientating charts and the group had talked about it together, so each of them had a better meta-cognitive understanding of the structure of the essay and the elements within it.

Despite making better progress, less than half the students were satisfied with their orientating chart and wanted to change the chart in some way before they attempted another essay. Many wanted to add more detail to the chart such as: 'key words' Jessie; 'suitable vocab' Lottie; 'a list of discourse markers' Jay. '[I would] stick the Orientating chart that Miss gave us onto the Orientating chart that we did ourselves.' Gilph wrote: 'I would add more about what to include and make it more detailed.' This displays a good level of engagement from the students. Their meta-cognition of the essay writing process has developed, they wanted to make their charts more complete, realising there was a lot more information that could have been included for them to write a better essay. The students are keen to progress and complete the task 'correctly'. (Gal'perin, P., 1989 (1974), p.71). In some ways it might seem their motivation has increased.

Their first orientating chart was designed using prior understanding and the deconstruction of an expert essay; the design was personal and included partial knowledge, by this I mean their developing understanding of essay writing. The second orientating chart was designed after they had reflected upon their own essays, they had had time to compare the ECAT and understood more of what they had to do to improve. During the writing of SWP1 Kim did not use his orientating chart at all. He commented on the SWP1 post essay questionnaire that he, 'didn't need much help [writing the essay]'. However, when he came to write SWP2, Kim commented that he had used his orientating chart: 'a lot' resulting in improved progress. Kim had understood the importance of the Orientating chart as a tool for improvement, it enabled 'the understanding of the task and the formation of fully fledged knowledge and abilities much easier'. (Gal'perin, P., 1989 (1974), p.72).

All these students were motivated to continue to develop their learning and understanding in order to write an essay like an expert. 'Insightful learning can occur if the subject has at his disposal a complete orientating basis consisting of all the elements of the problem space in question.'(Haenen, 1996, p.126) After two SWPs 'it becomes clear to the learner how the operations involved are connected to changes in the material'. (Haenen, 1996, p.134) The students are recognising the purpose of the Orientating chart.

In the post data collection quesitonnaire, Monika, Claire and Kim agreed that the most helpful part of the Stepwise Procedure was using the Orientating Chart to help them to write the essay. Both Kim and Monika gave that five out of five, whereas Claire only gave it four out of five, in fact

she didn't give any of the Stages five out of five. Deconstructing the expert essay was also considered by all three to have been important in helping them to understand the essay writing process. Monika commented on her post data collection evaluation questionnaire that the deconstruction stage was helpful because it involved: 'going through different parts of the expert essay so I know how to use things like subject terminology'. In addition, Monika said the most successful stage in her opinion was the creation of the orientating chart.

Gal'perin's model for a teaching-learning process with its 'instructional interventions for the teacher to support and guide the learners' (Haenen, 2001, p.161) enabled all the students in this cohort to make progress in their essay development and thus gives support to the view that this is an invaluable tool for teaching even complex tasks.

Talyzina, 1981, cited by Haenen, 1996, found that the most successful SCOBA was one that was general, complete and guided constructed. Talyzina agreed with Gal'perin that the teacher should not provide the inventory of how to create the grapheme shapes, but only the principle of identifying them. Talyzina also agreed that the communicated thinking between the students as they wrote each shape was vital in supporting the learner until 'the learner just knows that's how it is' (Gal'perin (1957) p221: cited by Haenen, 1996, p.142). The second orientating chart in my data collection period, was created in a much more collaborative manner, involving the students sharing their thinking in the Overt Speech stage. Haenen commented that this discussion and thinking process during the Orientating stage was key for the students to develop their understanding, 'with such an orientating basis the subject comes to see the solution after pondering the problem' (Haenen, 1996, p.126). But it is apparent that their meta-cognition of the process makes a difference and I discuss this in more detail in the next section on educated discourse.

My research lends support to Gal'perin's theory. The students made progress using Gal'perin's Stepwise Procedure to develop their essay writing, and although none of the students have created an essay like an expert. One could argue they do not yet have, at their 'disposal' a complete orientating basis either because they do not understand, or the orientating basis is not as complete as needed. Gal'perin's research showing how complicated tasks could be 'learned unexpectedly easily in action in the process of problem solving' (Gal'perin, P., 1989 (1974), p.70), was based on 14 trials. I did not have enough time for 14 trials, and yet the two SWPs I conducted during my data collection period showed all students improved. Perhaps if I had had time for 14 trials, students would have made even more progress and produced expert essays of professional quality. Throughout the data collection process, I did not provide students with answers to how

to write an essay but provided opportunity to discuss and through mediated processes create their own orienting charts. For SWP2 the students collaborated to create an orientating chart and supported each other in understanding the essay writing process. This communicated thinking between the students was vital in their understanding.

5.1.2 Materialised stage

The Materialised Stage of Gal'perin's Stepwise Procedure is the third step. It is an important hands-on recreation of the whole. Gal'perin described it as a stage where: 'objective properties and relations … [are given] a material form that is directly and sensuously accessible to us … [without it learning] will be seriously impaired' (Gal'perin, P., 1989 (1957), p.50). Monika confirmed this in her comments about the Materialised Stage: 'the 'separate lessons on each little bit of the essay really helped'.

Discourse markers was one such element afforded a separate lesson and as such it proved a key element in supporting the students to structure and develop their essays. The focus on this element in the materialised stage included a lesson to recap on and categorise these words using a mix and match strategy and then practising the use of them within a class debate; this helped establish their importance. In the baseline essay many students, like Kim and Claire, used simple discourse markers, such as: when, but as, also, so, because, after. Only four students were using discourse markers appropriately and effectively in the baseline essay compared to 20 out of 23 students in SWP2 essay. The students started to realise how important the discourse markers were for structuring their essays and referred to them in their post essay questionnaires: 'I added discourse markers' (Claire);'I was most pleased about the discourse markers and structure' (Vanessa); 'I was pleased about the range of discourse markers I used' (Alexa);'I was frustrated that I ran out of discourse markers' (Bean).

Many of the students had been taught about discourse markers before this piece of research, but the combination of identifying them within the expert essay, categorisation and practicing using them in the live debate seems to have given them more confidence to insert them into their SWP2 essay. A similar outcome resulted from the counterarguments and the sophisticated conclusion work that was conducted in the Materialised Stage. The students had opportunity to play around with the counterargument using the template identified in the expert essay by McDuff and they practised writing sophisticated conclusions like Obama and King. (Refer to The Methodology Chapter section 3.3.3.) The confidence they developed helped them achieve higher grades in these areas. Comparing the class results for writing a clear counterargument, it rose from 30

points in the baseline essay to 69 points in the final SWP2 essay, indicating that every student had written a clear counterargument. For the inclusion of a sophisticated conclusion, the class mark rose from 23 points to 53 points; highlighting how the Materialised Stage enabled meta-cognition resulting in an improved essay.

The act of devising a material form for the elements with a task was one of Karpova's criticisms of Gal'perin's Materialised Stage. Karpova's criticism, in 1955 cited by Haenen (Haenen, 1996) focused on the inappropriate nature of using some material object to represent the final executive action. Karpova and Van Oers (Van Oers (1987); cited by Haenen, 1996, p.185) criticised the use of a different mode of expression within the Materialised Stage, such as the counters used for syllables which they believed, in some ways, minimized meta-cognition and transfer ability (Haenen, 1996, p.185). However, the material objects used in my research, such as discourse markers, sophisticated conclusions, counterargument, modal verbs, modifiers and active verbs, represented, in themselves, elements within the final outcome almost exactly. It was not a different mode of expression, it was an example or a template of what I wanted the students to accomplish, even though it wasn't to be an exact copy, unlike the graphemes experiment.

Gal'perin was quite clear in his Stepwise Procedure that the Orientating stage and the Materialised stages should be considered separate and consecutive. He asserted that the Materialized Stage was an 'objective [part] of the sequence of phenomena being studied'.(Gal'perin, P., 1989 (1957), p.51). In this research, however, a system of alternating between these two stages, was more practical. As a practising teacher, working with a live class, four hours a week, I formatively assessed them for their understanding and progress each lesson, making adjustment to my lesson plan, recapping information where necessary, referring to the expert essay or orientating chart while the students were working on an element such as the counterargument in the Materialised Stage.

As such, the Orientating Stage became fused with the Materialised Stage. Gal'perin recommended an examination of 'The pattern of the model of the action as executed by a craftsman' or expert with clearly 'prescribed indices' (Gal'perin, P., 1989 (1969), p.28). The expert essay defined the outcome for the students and became the template which was manipulated within the Materialised Stage.

This was evident, for example, in SWP1, when the students' efforts to deconstruct the first expert essay presented to them, it showed how they were able to 'orientate' themselves to the overall shape and became more analytical 'spontaneously spotted indices' (Haenen, 1996, p.158). Many students found the deconstruction of the essay the second most helpful task in developing their

essay writing skills. Zoe's comment epitomises Gal'perin's argument: 'Looking and evaluating the expert essay helped me because it gave me an idea of what my essay was supposed to look like' (Zoe) Deconstructing the expert essay, not just reading it, helped secure that 'necessary preliminary knowledge' (Gal'perin, P., 1989 (1974), p.71). The students were able to identify the different elements and examine the structure bit by bit, an important precursor for reconstructing the essay like an expert. As the students realised what was necessary for the 'correct performance' (Gal'perin, P., 1989 (1974), p.71). The orientating chart made by Vanessa and Jessie included many sections of the deconstructed essay, adding discourse markers and pointers just before writing the essay. The SWP2 orientating chart contained even more information directly gleaned from the Materialised Stage, such as how to write the counterargument and the sophisticated conclusion. This information could not have been included into the orientating chart if the students had not been through the Materialized Step first, that allowed them to work with the elements, understand the elements and then include those elements into their originating charts.

The material act of devising the orientating chart after the Materialised Stage, enabled the students to maximise metacognition and develop their essay writing ability, giving them more confidence in their future essay writing skills. For these students, it was the physical manipulation of working with the orientating chart and the different bits of the essay that helped these learners to understand (Haenen, 1996). By having a model of the outcome, as in the expert essay, the students were not 'bound up' with the material object in itself, but it provided the 'essence of the structure of the discipline.' Or as Salmina 1988 suggests, a kind of 'learning and play'(Haenen, 1996, p.191).

One could argue that the teaching of separate elements of a concept is the framework of teaching. But the essay is a complex task and needs a more holistic approach. Within the Materialised Stage the students are playing or manipulating essay components, but the students cannot write a conclusion, or a counterargument on its own, it needs to be seen as part of a whole and within that whole needs to be logical, justified and cogent. The Materialised Stage is about deconstructing those separate elements and objective qualities that 'are inaccessible to use directly in their genuine, material form acquire a material form that is directly and sensuously accessible to us' (Gal'perin, P., 1989 (1957), p.50). The students need to understand how all the constituent parts of the essay fit together to create the whole. When given the full orientating basis of the actions at the start, and the opportunity to practice and manipulate the parts of the whole, the students more easily comprehend how to reconstruct the whole.

5.1.3 Motivation

Gal'perin believed motivation was an important pre-requisite of the Stepwise Procedure and that the Soviet student was motivated by the 'societal significance … for which [school work is their] personal responsibility' (Haenen, 1996, p.124). His aim was that through the use of the Stepwise Procedure there would be better student preparation for learning tasks, and that an all-encompassing holistic orientation towards the task would reinforce student motivation. The act of looking ahead to what will be created or produced leads to 'cognitive planning and monitoring.' (Arievitch and Haenen, 2005, p.162) and a self-regulated student.

My research indicates that the students valued the prior knowledge of the expert essay and that they became active participants through the process of deconstruction. And as a result, the deconstruction of the expert essay was what gave them more confidence to reconstruct their own knowledge and understanding. They could see the essay created by the expert and they wanted to create one like that. Monika commented in her evaluation that: 'At the start of the year I really didn't know how to write an essay and now I know what skills to use.' In that final evaluation, many of the students referred to the expert essay and the process of deconstructing the expert essay as one of the most helpful aspects of the Stepwise Procedure.

Many of Gal'perin's peers, according to Haenen 1996, criticised Gal'perin for the limiting aspects of the Stepwise Procedure, arguing that there was a lack of space for discovery and that it produced passive learners merely copying their teachers' instructions. Some even criticised Gal'perin's Orientating Stage and the full disclosure of the SCOBA. They thought that giving students all this information at the start made it more difficult for learners to appropriate new knowledge for themselves, and that it created passive learning (Haenen, 1996, p.193).

This might be shown through an example during the Overt Speech Stage. During the student recorded conversation, Monika is asked by a peer why she wrote a certain phrase in the template, Monika responded saying: 'I put … cos' it was on the board and I just copied. [laughs].' As a reader, we might agree with Gal'perin's critics that Monika was merely copying and therefore not learning in a metacognitive manner, but as I have indicated in Monika's case study, Monika made the most progress of the class and seems to have internalised the educated discourse of essay writing, above and beyond some of her peers. This suggests that what we see is not necessarily what is going on inside the students' mind. Her laughing belies her reticent position of being the peer with more knowledge and a leader of the collaboration process; she perhaps tries to

undermine her own enthusiasm and even belittle her 'new educational-cognitive motives and … learning' (Markova, 1990, p.281) when faced with her peers. Her active role within the group and her participation reveals her journey towards the self-regulated learner(Schunk and Zimmerman, 2008; Wentzel, 2014), perhaps her conduct, the laughter and dismissive attitude of her completion of the template, is influenced through a mix of motives based on her personal goals, her sense of self and the community, or peer group, she is placed within. (Haenen, 1996; Daniels, 2001).

As practitioner researcher, I acknowledge my role in motivating the students. Firstly, echoing Markova's (1990) view that it is the teacher's 'special task' (Markova, 1990, p.281) to motivate the students. Within this role my fervour for implementing Gal'perin's Stepwise Procedure in the classroom generated enthusiasm and eagerness amongst the students to try out this new method and they often asked me how my writing was progressing. Secondly, I acknowledge my role as 'activator'(Wood, Bruner and Ross, 1976, p.89) and 'dominant' mediator (Daniels, 2006). I was scaffolding the development of the SWP within the class and was the dominate mediator having the control of the new educated discourse and knowledge of the academic process of essay writing. This was therefore my 'special task' task' (Markova, 1990, p.281)to ensure the students' involvement 'keeping them in the field' and 'deploy [ing] zest and sympathy to keep [them] motivated' (Wood, Bruner and Ross, 1976, p.98). Markova believed that keeping the students 'in the field' (Wood, Bruner and Ross, 1976, p.98) was done by involving the students in the act of monitoring and assessing their own work and progress which would give 'rise to new educational-cognitive motives and promoting an interest in the content techniques and the process of learning.' (Markova, 1990, p.281) My data shows that the process of encouraging student participation in assessing their own grades was a key task which appeared to stimulate motivation.

After SWP1, when I showed the class graph of achievement in various elements and how I had calculated that, it appeared to motivate some students to improve. They were able to assess their own work against the ECAT and compare their own competence against the class. This act of monitoring, assessing, and comparing their own work, developed their motivation to improve. Many students were more able to identify elements for improvement and were motivated to improve those elements, like Claire who recognised areas of weakness: '[I need] facts to support my conclusion. I improved on my use of discourse markers. I didn't use my POV on both arguments enough.' Claire was reviewing her progress in the light of the ECAT and the class graph of competencies and as a result Claire showed an ability to be critically constructive with her own work: She recognises a lack: 'I need facts …'; she acknowledges achievement: 'I improved upon

my …' and she is also able to make an evaluative comment when she recognises that she 'didn't use …enough'. In assessing her own work in a detailed manner, Claire develops 'new educational-cognitive motives and promotes an interest in the content techniques and the process of learning' (Markova, 1990, p.281). The combination of understanding the final outcome, through the use of the SCOBA in the Orientating stage, and understanding the constituent parts of the essay, enables Claire to assess and monitor her work with the aim of improving it. The desire to improve her work shows her motivation to achieve.

One might argue that the comparison of competence, through the use of the graph and the desire of students to compare their scores, which they calculated themselves, appears to support a goal-orientated theory of motivation. And from one point of view, the students did want to achieve a higher score, but to only recognise this as an extrinsic motivating factor would be to stand in a behaviourist's shoes. My data indicates that this seemingly goal-motivating factor stimulated the students' intrinsic motivation, creating more self-reliance (Pulfrey, Darnon and Butera, 2013). As the students developed meta-cognition of the essay writing process, they were learning about their actions and work from the standpoint of others, their learning involved, 'co-knowledge' (Gal'perin, P., 1989 (1957), p.53) and gave them a 'greater context-specific perceived locus of control … shown to exert positive effects on subsequent motivation and behaviour' (Pulfrey, Darnon and Butera, 2013, p.54). The students were developing more control over their own outcomes, they knew what that outcome needed to look like, they were identifying how they could achieve that outcome and as a result gained control over their achievements.

The students worked hard to improve their work. This was seen through Kim's case study. He appeared perhaps vague and unfocused at the start of the data collection period saying he wanted to improve in 'every single one[of the criteria]'. At the end of the data collection period Kim had improved in every one of the criteria, he was using the orientating chart 'a lot' to support his improvement revealing his motivation to improve. Dweck (Dweck, 2012) suggests that as students improve their work through hard work, it creates within them more self-regulation and motivation. Within Dweck's incremental theory of intelligence, motivation is generated when students believe they can improve, and that the teacher believes that too. Perhaps the inclusion of the expert essay, as an accessible article which the students could believe they could reproduce because they understood how it was produced and had deconstructed it to see the constituent parts, enabled them, the students, to believe they could improve, engendering incremental theory and motivation.

5.1.4 Confidence

In the final evaluation questionnaire, I asked the students how confident they felt about writing essays in the future. Many of them felt positive about writing essays in the future, indicating the success of using Galperin's Stepwise Procedure in supporting students in their essay writing ability.

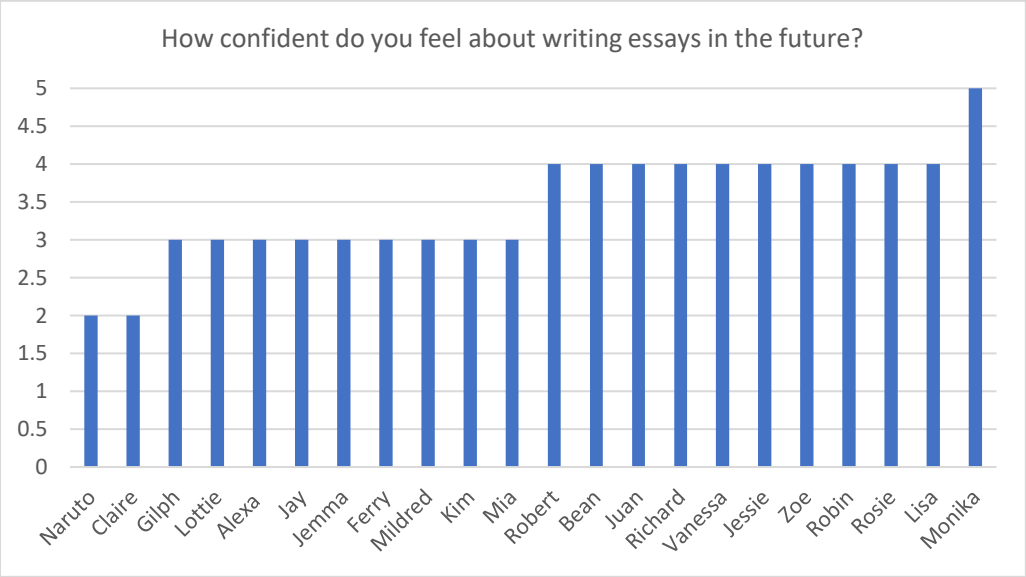


Figure 60: Graph showing the confidence levels of students at the end of the data collection period.

The graph I have created shows this confidence in a clear manner (See figure 72). The scale I used was a Likert scale of 1 – 5. In this scale 5 indicated the student felt 'very confident' about writing future essays; 4 indicated students felt 'very good' about writing future essays; 3 indicated students felt 'good' about writing future essays; 2 indicated students who only felt a 'bit' confident. There were only two students, Naruto and Claire, who chose this number to reinforce their lack of confidence. Both students had made significant progress in their essay writing achievement from the baseline to their SWP2 with increased differentials of 18 (Naruto) and 13 (Claire). Gal'perin expected his students to 'just know that's how it is' (Gal'perin, P., 1992 (1978), p.54) after using the Stepwise Procedure, but his research students had used the method 14 times, compare to this research class who had only used the procedure twice.

Haenen and Arievitch's circular model (Arievitch and Haenen, 2005) of Gal'perin's Stepwise Procedure reinforces the importance of a repetition of the SWP. Their circle, refer to figure 6, ascends to a more advanced meta-cognitive level with each rotation, refer to Literature Chapter

section 2.7, creating a 'mature synthesis of what has been learnt' (Haenen, 2001, p.167). Monika's top achievement in essay writing with her 20 point positive differential from her baseline essay, demonstrates her meta-cognition of the essay writing process. Menchinskaia, reportedly, according to Haenen (1996) argued that the student would not develop a personal understanding of how to improve their work if they were guided so completely by the Orientating Chart. But Monika's clear identification of areas for improvement throughout both SWP show her actively engaging and analysing her own improvement pathway, 'analysing and synthesizing on [her] own strengths' (Haenen, 1996, p.193) indicating mastery of the action; this is not a rote blind learning of an orientating chart. This reinforces the importance of giving the student time for personal reflection of their work after the teacher has marked it. In reviewing and evaluating her own work, and setting herself clear targets for improvement, Monika has made more progress.

In Monika's case, and others who appear to have made greater progress, such as Bean, Jessie, Rosie and Richard, we might agree with Gal'perin that the SCOBA for essay writing has been 'learnt unexpectedly easily in the action in the process' of engaging in the SWP and giving them the confidence to believe they could write essays like an expert in the future. But on the other hand, perhaps Naruto and Claire, who confess to being less than confident in their future essay writing, had a more realistic evaluation of their ability and meta-cognition, intrinsically understanding that the Stepwise Procedure for essay writing was not familiar enough for the 'mechanism to be triggered automatically' (Gal'perin, P., 1992 (1978), p.62). Perhaps the other students were overconfident in their abilities to write essays like an expert in the future after this data collection period. This indicates a gap in my research which could be investigated.

5.2 RESEARCH QUESTION TWO: EDUCATED DISCOURSE

> How might using Gal'perin's Theory of Systematic formation of actions and concepts and his Stepwise Procedure, including the SCOBA develop or contribute to a common educated discourse for English language essay development in a secondary school?

Gal'perin's Stepwise Procedure makes a link between the material, the mediator, the dialogue, the outcome and the metacognitive understanding of the outcome. Whereas Vygotsky focused on the

importance of speech for learning which takes place through social interaction on a cultural and historical plane, Galperin argued that speech only orientated a person toward 'joint activity with the speaker, whereas cognition orients him toward purposeful transformation of objects' (Gal'perin, P., Ia., 1992 (1977), p.90). Gal'perin's fourth step in his Stepwise Procedure was Overt Speech, whereby the student explains the action in detail, even minutiae indices, and in 'learning a relation to this form of the action from the standpoint of other people, the student thus creates a 'co-knowledge' (Gal'perin, P., 1989 (1957), p.53).

In the post research evaluation questionnaire, the students did not rate the Overt Speech stage as a helpful step within the SWP. Only one student, Juan, was positive about the Overt Speech stage indicating it was most successful because it enabled: 'talking to others as you got to share ideas and to help each other'. In my research journal, however, I had written on each group work occasion, that: 'some are too chatty.' Despite Gal'perin's assertions that mediated talk improved results, I was constantly concerned about the chattiness; I was concerned that the students were off task, about whether their unfocused attitude belied a lack of motivation, a lack of understanding, or a lack of pace. It was only later when analysing my results, that I noted that, when I analysed the talk while the students were in groups, I saw meta-cognition and peer learning taking place. It appeared, perhaps, that Juan understood, at this point, the importance of the Overt Speech stage more than I. The 'chatty' nature of the students in my research class refers to their seemingly inconsequential talk during task directed group work. Mercer's research (1995) showed students habitually used a colloquial and chatty style of talk when talking about topics in the classroom, and found 'educational discourse' tricky to handle, and were frequently 'unable' to use 'educated discourse'. (Mercer, N., 1995, p.80) My perception of 'chattiness' perhaps reflects the fact that the students had not been taught educated discourse and found it difficult to use.

At the start of this data collection period students did not have the educated discourse to talk about essays. Their talk, recorded in the first sound bite, was imprecise and their language was chatty in style. The chattiness, of my concerns, revealed language that embodied matters of surface form such as word length and the number of paragraphs required. This suggested that there was no clear understanding of the deeper structure of the essay writing process. Students used words associated with English Language, for example: 'paragraphs' Alexa, 'opinions' Naruto, 'describe something in more detail' Jay, but they were not using specific educated discourse about essays.

Their educated discourse appeared limited to the Oxford School Dictionary definition: 'a short piece of writing by a student as part of a course of study' (OED, 2012). This again reinforces Mercer's argument that students prefer to use a chatty style of talk and are often unable to use educated discourse. (Mercer, N., 1995, p.80) Monika, Kim and Claire, however, did use some educated discourse as the words in their first baseline soundbite: 'describe' and 'paragraphs' can be classed as educated discourse of an English secondary school classroom. But in this case, they are using the word 'describe' imprecisely. Within an English classroom the word 'describe' refers to creative writing, in the form of stories and poems, using linguistic devices such as similes and metaphors to create a visual image. These three students only spent four lessons, each of 50 minutes, per week in the English classroom and, due to the nature of secondary schools, were continuously assimilating the educated discourse of many subjects. For instance, 'describe' in the secondary school subject of geography refers to writing an accurate account of a geographical feature and the main characteristics of that feature (OCR, 2019). It could be argued that from this point of view, their understanding of what must be done within an essay is not necessarily wrong. But on the other hand, it reveals their lack of precise educated discourse for the task before them, that is: writing an argument essay within the subject confines of English. The students needed to refine their use of educated discourse to differentiate between the semantic usages in different disciplines.

In addition, the length of the recordings underlines their lack of confidence in using educated discourse. Although the students were given two minutes to record their ideas, students spoke very little in the baseline recording, the mean number of words being 58. After SWP 2 they showed much more confidence in their talk. The students used a more sophisticated word choice and included more words in their limited two-minute period. The mean number of words used per soundbite at SWP2 was 119. Their language much more precise: 'point of view,' Ferry; 'discourse markers,' Monika; 'counterargument,' Alexa; 'emotive language to connect with your audience,' Robin; 'rhetorical questions,' Richard. The soundbite recordings only give a snapshot of the students' emerging educated discourse. The change in their language was more obvious in the recorded Overt Speech session.

The Overt Speech Stage at SWP2 was a more structured discussion involving the Orientating chart template, and thereby giving the students a clear focus. Hewitt promotes the idea of structured talk, which Hewitt argued, if planned by the teacher and supported, or guided, by more able peers enabled more effective outcomes (Hewitt, 2012). Students used clear educated discourse.

> Claire: 'Complex sentences … development paragraph … justifying it.'

Kim: 'Key words, the modal verbs, modifiers and active verbs … more facts, time and place … counter argument … make your PoV clear.'

Monika: 'History, time and place and introduce opinion … discourse markers … key words … active verbs … justify it, a counter argument … emotive language.'

Their discourse here, underlines the students' growing confidence in using educated discourse between themselves in their groups, and in sharing a common language that they understand. This supports Mercer's view that the promotion of educated discourse, 'embodies ways of using language – discourse – which students need to be enabled to understand and to use if they are to become educated.' (Mercer, N., 1995, p.85) One could argue that the students had more of an opportunity to show their educated discourse in the Stage of Overt Speech recording as they were given up to 30 minutes to record compared to the mere two minutes I allowed for the sound-bite recording, thus it is easier to find evidence of the development of educated discourse.

Significantly, the students' surface and vague vocabulary had changed from the language recorded in the baseline, into something more sophisticated, an educated discourse used in essay writing, demonstrating their metacognition of the essay writing process. They could explain the structure and the different elements within the essay. This is seen, for example, in Bean's comment that: 'The conclusion needs to link to the introduction.' They were able to differentiate between elements within that structure and explain how they support and develop the essay. A further example came from Gilph, who stated that: 'facts and statistics are pretty useful as it adds proof to your explanations'. They were demonstrating an ability to communicate with each other in this new educated discourse.

The Overt Speech Stage in SWP2, also gave much more of an insight into how the students were operating 'instructional discourse' (Martin and Rose, 2015, p.19) Without the teacher, the students took control of the conversation and instructed one another. They became the mediators for each other 'through social interaction and negotiation' (Daniels, Cole and Wertsch, 2007, p.187)the students were learning through assisted discovery, in cooperation and collaboration with more knowledgeable peers.

In structuring the SWP2 Overt Speech Stage around the orientating chart template and giving 30 minutes for that talk, it facilitated a more relaxed attitude within the group and students sounded more comfortable asking for clarity from one another and developing their understanding. This is seen, for example when Kim asks: 'What is the counter argument?' Naruto clarifies, elucidates, and refutes Kim's various ideas and comments, leading Kim in their educated and instructional

discourse of essay writing. While developing ideas in another group, Claire retorts to Ferry: 'Yeah, but you done that in the first development paragraph', to which Ferry replies, 'so you can do it again'. Claire is not reticent at querying a statement, as she might be in the classroom in front of all her classmates. Furthermore, when talking about the elements of counter argument, they try out different ideas with each other until they appear satisfied with the outcome. This is highlighted in this interaction in one of the groups:

> Claire: 'Pointing out what is wrong and justifying it.'
>
> Alexa: 'Isn't that counterargument?'
>
> Robert: 'Some people might think.'
>
> Jessie: 'That is counterargument.'

Although one could argue that these students are not involved in a full discussion or debate on the issue of counter arguments, they are using educated discourse in their conversation and trying to identify the exact wording they should use. It shows a growing confidence and engagement in the educated discourse of essay writing. The inclusion of a more able peer in each group enabled development of meta-cognition and involvement of all. This kind of collaborative instructional conversation validates each of the students' contributions; 'it is not so much the transmission of information as the interpretation and collaborative co-construction of understandings' (Nystrand, 1997, p.7) . All the students are sharing in this educated discourse. They are 'using language to think and communicate ways of words [that] will enable [students] to become active members of wider communities of educated discourse' (Mercer, N., 1995, p.80)

Some student groups were self-evaluating ideas by comparing them to others. For example, Lisa and Monika discussed the use of personal experience within an essay:

> Lisa: 'For this one, I put, using experience to get point of view.'
>
> Monika: 'Yeah, what? You … huh?'
>
> Lisa: 'Using own experience to get point of view.'
>
> Monika: 'Yeah, I put using personal experience that's related to the problem and attack issue.'
>
> Lisa: 'Yours sounds better!'

Lisa was evaluating her explanation for including personal experience within the essay and after hearing what Monika has said, concludes that Monika's explanation sounds better. This pair of

students are actively assessing their own work. 'They [have] became involved [giving] … rise to new educational-cognitive motives and promoting an interest in … the process of learning.' (Markova, 1990, p.281). Vygotsky's principle is also underlined here in that a 'child learns when guided to higher levels of cognitive development by talk and experience shared with adults and other more able peers'(Hewitt, 2012, p.403). The students create 'co-knowledge' (Gal'perin, P., 1989 (1957), p.53) as they talk and appear to be 'operat[ing] in the instructional discourse [that] provided learners with explicit knowledge'. (Martin and Rose, 2015, p.19) The students use of educated discourse has given them that 'immanent power' allowing them to 'move to a higher level of abstraction' (Brevik, Fosse and Rødnes, 2014, p.54). They have confidence in the words used, the concepts behind the words shown through confidence in their explanations to each other.

The understanding shown in the students' talk provides a counter to my fear of chatty off-task behaviour and reinforces the need for the teacher to specifically create opportunities for the students to engage in educated discourse, and not shy away from difficult language, or group work, in the classroom. (Mercer, N., 1995) It also seems to suggest that in creating a specific space for Overt Speech the students had an opportunity to explore and engage in the educated discourse developing their own meta-cognition of the essay writing process. They had in fact developed a common language in which they could converse and understand one another; it was more specific, more precise and gave them the educated discourse of the academic subject giving them more control over their own progression, giving them meta-cognition of the process of essay writing.

5.3 SUMMARY

My research suggests that Gal'perin's Stepwise Procedures that I conducted during this data collection period helped the students to develop their essay writing skills and their educated discourse associated with essay writing. My research also suggests that the students moved from an emphasis on matters of surface form, such as word length and paragraphs, to an understanding based on a deeper structure and cogent style. This evidence supports Mercer's conclusions that 'using language to think and communicate ways of words will enable [students] to become active members of wider communities of educated discourse' (Mercer, N., 1995, p.80).

Most of the students dismissed the Overt Speech Stage as an important element in supporting progress in essay writing. But this is counter to Vygotsky's theory of learning and development being a 'mediated process.' (Daniels, Cole and Wertsch, 2007, p.2) firstly between people 'through social interaction and negotiation' (Daniels, Cole and Wertsch, 2007, p.163).

My research reinforces Gal'perin's theory and the importance of the Overt Speech stage, in that transferring the action 'meticulously from the material action to the verbal plane … is the only point that the object content enters entirely into consciousness … not yet as the student's own thought, but as a verbally evoked representation'(Gal'perin, P., 1989 (1957), p.52). It has become 'co-knowledge' (Gal'perin, P., 1989 (1957), p.53) reflected by and from others. Their meta-cognition is illuminated by their peers. It is quite possible that the students do not yet understand that, 'Higher psychological functions [of understanding the essay writing process] have their roots in social interaction and are formed as a result of internalization.' (Haenen, 1996, p.73) This points to how educated discourse reinforces the students' development of essay writing.

In this Discussion I have explained how evidence from my data collection period shows that Gal'perin's Stepwise Procedure, as a pedagogic method, can deepen students' meta-cognitive understanding of the essay as a genre of written text. The Stepwise Procedure has both enabled students to make progress in their essay writing skills and develop their educated discourse, enabling them to use more sophisticated language when discussing the topic of essay writing, giving them more confidence and something of the 'immanent power' mentioned in the work by Brevik et al (Brevik, Fosse and Rødnes, 2014, p.54). It is the connection between the development of educated discourse, and metacognition of the essay writing process which appears significant in this study. I will clarify this in my conclusions.

6 CONCLUSIONS

In this chapter I am going to state my conclusions in response to my two research questions. I will then describe my contributions to knowledge in the light of Gal'perin's theory and the practical implications of its use in the classroom. I will end with acknowledgements of the limitations of this piece of research and give recommendations for further research in this field.

6.1 RESPONDING TO MY RESEARCH QUESTION 1: ESSAY WRITING

> How might Gal'perin's Theory of Systematic formation of actions and concepts and his Stepwise Procedure, including the SCOBA and orientating chart, enable students in English Language lessons to develop their essay writing skills?

My research indicates that using Gal'perin's Stepwise Procedure is an effective way of enabling year 9 students to improve their essay writing skills and their meta-cognitive understanding of the essay writing process. Although the essay is a complex task, unlike Gal'perin's original research in the relatively straight-forward area of the mechanical handwriting skills of four-and five-year olds, I have shown that there are specific elements necessary for essay writing which students can gain control of and understand through the implementation of Gal'perin's Stepwise Procedure. Despite concern that using the steps of the SWP would result in dead formulaic essays, many of the students within this cohort wrote essays incorporating sophisticated vocabulary and discourse markers that showed a developed argument that they had been unable to produce before the data collection period, as shown through the differentials of their baseline essay achievements compared to their SWP 2 essay achievements.

While Gal'perin was unsure whether his SWP would work for more creative thinking subjects (Gal'perin, P., 1989 (1974)), my research does lend support to Gal'perin's SWP for use with more complex and creative thinking tasks, such as an essay. Within an essay there is both a systematic formation, that is a structure and a formal development which is understood by those with experience, and there is a creative thinking process, whereby the writer assimilates their ideas into this structure communicating these various opinions and points of view, contradicting them and developing some reasoned argument. When Gal'perin posits: 'Might it be that creative thinking contradicts good knowledge of what is already known, and creative discovery rules out

the necessity of its being systematically refined and systematic assimilation of its results?' (Gal'perin, P., 1989 (1974), p.82), my data indicates an opposing view. This research demonstrates that once the students understand the systematic and formal 'good knowledge' of how an expert essay is written, they then have a mental template that they are able to reconstruct and within that template, develop their own creative thinking on a topic. The SWP does not enable them to come up with original ideas but allows them to develop their point of view into a construct which allows it to be communicated to others. By reading and analysing expert essays, students are privy to a variety of ideas that could stimulate them to form their own point of view about a topic.

Gal'perin's own research required 14 trials before children were able to create perfect graphemes. My research demonstrates how even two trials can improve achievement in essay writing, which happened in all the students in this cohort. This indicates that using Gal'perin's Stepwise Procedure is a factor in the improvement of these students' essay writing skills and understanding. Since 2017, the UK Government has placed more emphasis on end point assessments for GCSEs. Students are now faced with having to write many more essays in an exam context, not just for English, where they are required to write up to nine essays over the four exams, but for History, Geography and even some science subjects now have questions which require longer expanded answers. Year 9 therefore becomes an important year for developing meta-cognition of the essay writing process. Students need to develop their understanding and confidence if they are going to tackle the essays required for year 11 exams. This makes it critical that students have been well prepared in the art of essay writing. This research suggests that building on Galperin's Stepwise Procedure as described above offers a promising approach to working on more complex tasks with older students. But it is not just the task of essay writing which clearly improved for all students, what was more pronounced was their understanding of essay writing and their feeling of future confidence in doing it again.

Some might argue that this progress was due to the students' active monitoring and assessing of their own essays, giving rise to meta-cognition, (Markova, 1990), but my research suggests it is the collaborative nature of Gal'perin's Stepwise Procedure that makes the difference. The orientating chart was not created by a teacher and given to the students; even though I created a template for SWP2, the students worked together completing it with their own shared ideas and points. Each stage was mediated by the teacher or a more able peer. In addition, the monitoring and assessing were collaborative and were a direct response to the ECAT and the graphs shown to the students; the act of calculating their own marks elicited motivation and purpose.

A focus on the student's final evaluation of Gal'perin's SWP suggests that it was the use of the orientating chart and the deconstruction of the expert essays which the students believed helped them achieve progress in their essay writing. Both elements belong to the orientating stage of Gal'perin's theory. Rather than taking small steps which build up to the whole, Galperin's theory is much more holistic in its approach. It is the reverse of a usual teaching plan, which usually divides the task into small steps leading the students to the final outcome. The aim of Gal'perin's SWP is to show and explain the whole outcome first, showing the students the model of the outcome 'demonstrated by a craftsman' (Gal'perin, P., 1989 (1974), p.69) allowing them to develop a sense of purpose and direction towards a known goal. The quality of the goal, or action, depends upon the orientating component, the SCOBA which needs to be guided – constructed, general and complete.

My research indicates that Gal'perin's Theory of Systematic formation of actions and concepts and his Stepwise Procedure, including the SCOBA and orientating chart, enables students in English Language lessons to develop their essay writing skills. The process of being presented with the finished article, an expert essay and then deconstructing it, seems to have given the students more power and control over the process. Firstly, they understood what the final outcome looked like; this gave them a certainty in what they were trying to achieve. Secondly, the deconstruction of the essay enabled them to view the constituent parts and how it was incorporated the whole; this gave them confidence in handling the various elements of the essay. Thirdly, the collaborative work of creating an orientating chart facilitated independence and self-reliance; this conferred autonomy to the students. Finally, the Overt Speech Stage established their understanding through the development of 'co-knowledge' (Gal'perin, P., 1989 (1957), p.53) engendering a confidence and power over the whole essay writing process and enabling automation.

6.2 Responding to my Research Question 2: Educated Discourse

> How might using Gal'perin's Theory of Systematic formation of actions and concepts and his Stepwise Procedure, including the SCOBA develop or contribute to a common educated discourse for English language essay development in a secondary school?

While Gal'perin commented that the orientating chart was the key to a successful outcome(Gal'perin, P., 1989 (1974), p.69), my data, suggests that it is the Overt Speech Stage that

made the biggest difference in the meta-cognition of the students and resulted in them improving their essay writing skills. Gal'perin was convinced that the Overt Speech Stage, the act of transforming 'the material action to the verbal plane … is the only point that the object content enters entirely into consciousness' (Gal'perin, P., 1989 (1957), p.52) emphasising it is a key to meta-cognition. My data indicates that the collaborative nature of the Overt Speech stage, involving the mediator in the form of a peer, enabled a 'co-knowledge'(Gal'perin, P., 1989 (1957), p.53) to be developed in the students. This peer interaction, in the Vygotskian zone of proximal development (Daniels, 2001) allowed them to share their understanding; that understanding was reflected back to them, and even refuted by others, promoting meta-cognition of the essay writing process. Their talk was more precise, a 'fully and meticulously'(Gal'perin, P., 1989 (1957), p.52) described explanation. The students still chatted in sometimes off-task manners (as for example was seen in Kim's case study) but they were 'using language to think and communicate ways of words enab[ling them] to become active members of wider communities of educated discourse' (Mercer, N., 1995, p.80). My data indicates that the Overt Speech Stage enabled students to practice their new educated discourse, and through reflection and negotiation within a relatively safe peer group environment, grapple with and establish a meta-cognition of the essay writing process.

Furthermore, my research indicates that there are also other aspects of Galperin's Stepwise Procedure that contributed to the development of a common educated discourse for English language essay writing. Notably, the act of deconstructing patterns and elements within the expert essay and naming them gave the students access to the 'meta-language' (Martin and Rose, 2015) of essay writing. This meta-language formed the basis of the educated discourse of essay writing. In addition, the educated discourse was reinforced through the Materialised stage where the students were actively taught the specific subject terminology and encouraged to use it in the deconstruction of the expert essays, the manipulation of essay writing elements (for example discourse markers and active verbs) and the Overt Speech Stage.

Once the students had grasped this educated discourse, they were then able to utilise it within the classroom giving them more autonomy. It enabled them to collaborate in the development of orientating charts using the sophisticated language associated with the academic community of knowledge and become active participants within that community (Mercer, N., 1995), be that the class or the small groups within which they worked. Moreover, it enabled them to interpret their own learning through monitoring and evaluation (Markova, 1990) because in understanding the technical language of education (Halliday, 1993) they could identify what they needed to do to improve. In understanding and using educated discourse of essay writing in the classroom they

manifested meta-cognition as shown through the clear language development of Monika in my case studies section.

My research indicates that developing educated discourse, through Galperin's Stepwise Procedure supported the students' advancement to a deeper understanding of the topic and the subject (White and Frederiksen, 1998). The educated discourse became a tool for progression and metacognition (Brevik, Fosse and Rødnes, 2014). This in turn resulted in a greater confidence in their future abilities, with the students feeling more in control (Pulfrey, Darnon and Butera, 2013, p.54) and having 'immanent power' (Brevik, Fosse and Rødnes, 2014, p.54) over their progress.

6.3 CONTRIBUTIONS TO KNOWLEDGE

My research suggests that Gal'perin's Stepwise Procedure appears to offer an alternative model for teaching and learning that enables meta-cognition. Gal'perin's SWP is not a universal instructive template and the steps can be more flexible and fluid than past critics have suggested (Haenen, 1996). Rather than creating the passive learner, the Stepwise Procedure motivates and provides purpose through the full orientating basis being divulged through the SCOBA. This is the result of Gal'perin' Stepwise procedure being built upon the theory of how students learn, extending 'Vygotsky's notion of the zone of proximal development (ZPD) by including a teaching – learning model of the formation of mental actions, which integrates the notions of mediation, activity and internalisation'(Engeness and Lund, 2020).

My research seems to suggest the success of a teaching learning model which is in reverse order to traditional models. In this reverse process, using Gal'perin's SWP as a guide, there is firstly a revealing of the outcome demonstrated by an expert or craftsman, followed by a deconstruction of this expert outcome to reveal the constituent parts and the tools needed to create these parts, and finally the creation of an orientating chart or scaffold as a collaborative student-teacher project. This teaching and learning model would take more planning and understanding on the teacher's part, in order to deconstruct the whole and teach in a holistic manner (Nystrand, 1997), but if the result, as my research suggests, is greater meta-cognition and student confidence, that needs to be balanced against the difficulties of reconfiguring a scheme of work and traditional teaching know-how. However, it is not merely working in a reverse order that made the difference in student outcomes, my research suggest it was also achieved through: a) the repetitive nature

of the process; b) the Overt Speech Stage and c) the collaborative teacher-student nature of the process.

The repetitive cyclical approach, reinforced in Arievitch and Haenen's spiral (Arievitch and Haenen, 2005), represents how the student transcends to a higher level of meta-cognition as a result of each repetition of Gal'perin's SWP. This is not merely a case of memorising or remembering what they did before, that for instance Bloom's Taxonomy advocates (Krathwohl, 2002), but it is evidence of understanding the concepts of the constituent elements, through analysing and deconstructing the whole action or outcome. Through seeing the whole presented in different ways, such as the variety of expert essays presented to the students, the students started to understand how the different elements fitted together to make a whole and developed a deeper understanding of the essay.

My research underlines the importance of the Overt Speech stage in transforming the material into the verbal and finally into meta-cognition within the student. The Overt Speech stage is not merely an opportunity for group work but should provide the students with the opportunity to explain, in meticulous description, how to reconstruct the craftsman's work. Gal'perin's Stepwise Procedure enables a practical approach to Vygotsky's cultural historical theory of learning for the classroom (Haenen, 1996). The SWP is a deconstruction of how we learn; talk creates the image of the outcome from the viewpoint of others, since we are using words to communicate to others, and makes it more objective, it is now 'co-knowledge' (Gal'perin, P., 1989 (1957), p.53) and that helps it to imprint into our consciousness enabling meta-cognition (Mercer, N., 1995). The act of explaining to their peers how to populate the orientating chart with details and elements to create an expert essay, it enabled the students to understand the educated discourse and the sequential writing process resulting in meta-cognition of essay writing.

Furthermore, my research indicates that student collaboration increases their participation in the teaching and learning process, decreasing the likelihood of passivity. But this is a difficult thing for a practising teacher in the classroom with a series of objectives to push through to fulfil the curriculum. Any collaboration is time consuming, and it might be far easier for a teacher to create a full orientating chart and give it to the students to use. But as the chart reproduced by Haenen (1996), showing Talyzina's (1981) interpretation of the SCOBA, shows, only a guided-constructed (collaborative) chart makes the difference. The process of creating, evaluating, assessing, and adding to their own orientating charts supported the students' metacognition and the opportunity to populate an orientating chart template in groups, utilising the Overt Speech stage, in a collaborative process, seemed to be the most successful in changing the students' educated

discourse and therefore their meta-cognition. And even those, like Claire, who redesigned her own orientating chart in SWP2, after the Overt Speech stage, were reflecting that they had learnt collaboratively and created something that made sense to the student and was successful as it improved their final SWP essays. However, it was not merely the introduction of an Overt Speech stage which facilitated the student participation in educated discourse, it was a special task, something which needed to be reinforced by the teacher at each stage of the SWP (Markova, 1990; Mercer, N., 1995).

Collaboration could, perhaps, be considered as a way of increasing the control or power of the major stakeholder in the teaching and learning process. The student is the major stakeholder, their life in the teacher's hands. By increasing the students' control over their own outcomes, my research indicates that their motivation and progress increased. They saw the outcome demonstrated by the expert and they wanted to be able to do it like an expert too. This necessitated the teacher's belief in the students, and the implementation of Dweck's incremental theory (Dweck, 2012) that learning, developing and progress can take place through the mediation of the teacher or more able peer.

6.4 LIMITATIONS OF STUDY

My research was conducted in one year 9 class of 23 students in a small school in the South West of the UK and I was the researcher, observer, and practitioner. My position leads to some obvious limitations.

Firstly, one could argue it is context and culturally bound. However, my research suggests that the concepts within Gal'perin's stepwise procedure could be transferred to other contexts, beyond that seen in earlier research studies. Gal'perin himself worked with Kindergarten children, N .N. Nechaev's research was in law school with graduates and my research has been in a secondary school. It therefore seems likely that the concepts of Gal'perin's theory could be reproduced in other schools or places of education, with different ages of student.

Secondly, my position as an insider researcher, and the practitioner could contribute to a biased reading of my data. However, as I argued in the introduction to my Methodology, I position myself in the 'third space, never entirely an insider or an outsider but working in between the two' (Cormier, 2018, p.331). My participation in the research was as teacher and mediator and this position inherently involved evaluation and monitoring of my students in a professional manner.

Conducting the Overt Speech stage in student peer groups without my involvement helped to mitigate against the potential of the 'dominant mediator'(Daniels, 2006) and my data shows student participation and independently emerging understanding, even though there are references to my influence (referred to by Monika and Kim in the case studies).

Thirdly, one might argue that the choice of qualitative action research limits the validity of my conclusions. My research suggests that the repetitive nature of Gal'perin's Stepwise Procedure complemented the reflexive and circular nature of action research. And as an action researcher I was interpreting and adapting to the development of the data as it occurred (such as refocusing on discourse markers or supporting the inclusion of string on their orientating charts). But this ability to interpret and adapt enabled me to be more flexible and student focused in my approach. By student focused, I mean I was using a formative assessment process of questioning to try to identify whether the students understood the aims of the lessons; I then adapted, recapped or reiterated when I felt they did not understand. As is the nature of qualitative research there will be alternative explanations and interpretations, and some of my generalisations may be too context bound. As a pragmatist my meaning making is intrinsically woven into my practice, but the 'meaning' is not the inquirer's alone; meaning is made and understood by the community or social group. From within this wider, school community, not only did Penelope, my colleague, support my data interpretation, through her independent marking showing mine to be reasonable and of a standard recognised by my colleagues, but I was also asked to share my research with my school colleagues in a Professional Development session, highlighting the meaning made and understood by the community of practice of which I was part at the time of my data collection.

Despite these limitations, my data suggests that incorporating Gal'perin's Stepwise Procedure into a Year nine class setting and implementing it as a way to support students' meta-cognition of essay writing is beneficial for the students and supports their progress.

6.5 Recommendations for Further Research

Gal'perin's Stepwise procedure seemed to stimulate meta-cognition in the students in my research class through the collaborative process of creating orientating charts and the development of educated discourse through the Overt Speech stage. But further research could be done using a control class to monitor the meta-cognition of the essay writing process through

traditional methods of teaching rather than the use of Gal'erpin's SWP. This would enable conclusions to be drawn as to whether the SWP stimulates more meta-cognition than in a control class.

My research class were only involved in two cycles of the SWP, so more research could be done with a class of Year 9 students developing their essay writing over four or more SWP cycles. This might indicate how much more progress or understanding the students develop after more cycles of the SWP.

Many of the students in this research indicated they had future confidence in their essay writing ability because of using Gal'perin's SWP. The fact that I was unable to ascertain this development indicates another gap in my research which could be investigated, such as a further study with the same class perhaps after six months or a year, to compare their essay writing and development after their previous use of Gal'perin's SWP.

Another aspect which could be studied further is the Overt Speech stage. As a teacher who had never used Gal'perin's SWP or read about his theory before, I approached the stages in a fairly traditional manner at first. During SWP1, I did not emphasise the importance of the Overt Speech Stage other than to ensure that I included group work. It was only in the second SWP that I was able to generate a purposeful task, populating the orientating chart template, to facilitate the 'meticulous' description of the reconstruction of the outcome, needed to ensure the establishment of the 'material becoming verbal' (Gal'perin, P., 1989 (1957), p.52). The students did not recognise the importance of the stage as many classed it as the least helpful in all Galperin's stages, reflecting perhaps my initial undervaluation of the stage itself. Therefore, a piece of research, using Gal'perin's Stepwise Procedure that emphasised the importance of the Overt Speech and Covert Speech Stage, which I underplayed, would be a real benefit, underlining the importance of these stages and investigating the ways these stages influence the meta-cognition of the students.

And finally, research could be conducted investigating someone like me, a practising teacher who utilises, adapts and incorporates Gal'perin's Stepwise Procedure into a live classroom. It would be an investigation into how the act of implementing Gal'perin's SWP changes the teacher's practice and influences others in the education facility; this would portray the significance of Gal'perin's theory and Stepwise Procedure as an alternative teaching-learning model in today's classroom.

6.6 SUMMARY

My research journey started with a cross school collaborative project using Bloom's Taxonomy to try to develop a common language to aid progression, as discussed in my Context Chapter. Bloom's pyramid shape (Krathwohl, 2002) gives the illusion of progression, in that each step leads towards a pinnacle of creation, where the student is finally able to recreate that which they have learnt. Bloom's basic step consists of remembering, followed by understanding with the student needing to complete both steps before they can analyse or evaluate; in Bloom's model, both analysis and evaluation are considered difficult (Quaisar, 2001; Krathwohl, 2002; Arievitch, 2020). My research indicates that analysing and evaluating are the building blocks of learning, as shown through the deconstruction of the expert essay in the Materialised stage. My research study suggests that a student needs a holistic image of the outcome, in the Orientating Stage, and the opportunity to collaboratively deconstruct the outcome in order to understand how it is created. In contrast to Bloom, my study suggests that the step of remembering is unnecessary because there is an orientating chart, or cheat sheet (Haenen, 1996) to support the student until they 'just know that's how it is' (Gal'perin, 1989 (1957), p.54).

It is perhaps a conundrum, that teachers, including myself, earlier in my career, who aim to facilitate learning, turn too readily to Bloom's behaviourist taxonomy (Arievitch, 2020) rather than Gal'perin's theory of Systematic Formation of Actions and Concepts, the latter embodying a practical sequence of how learning takes place. My research indicates how Galperin's SWP facilitates meta-cognition in students where complex tasks, such as essay writing, are analysed through collaborative problem solving and critical thinking which are necessary for understanding. Teachers want their students to succeed and not get stuck at the first hurdle of memorisation (Quaisar, 2001; Arievitch, 2020). My research highlights how Gal'perin's SWP, with its reverse modelling, its holistic nature, and reinforcing of educated discourse through Overt Speech, can support student progress.

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8 THE APPENDICES

8.1 APPENDICES – QUESTIONNAIRES

Appendix 8.1.1 – Baseline Questionnaire					
Baseline Questionnaire					
1. How did you feel when you knew you had to write an essay without support?	Very unhappy or worried	A bit Frustrated and worried	OK	Quite pleased at the idea	Happy to do it
2. What scaffold or support would you normally expect from a teacher? (in writing an essay?)	None or minimal talk about what to do	Basic outline	A lesson of how to write an essay and suggestions of what to include	A lesson; a written scaffold to follow; lots of ideas	Point by point ideas of what to include in each paragraph and explanation of how to write
3. How many times (and in what lessons) have you been taught to write an essay since year 7?					
4. How did you manage to write the essay?					
5. What resources did you use? (Tick all used)	dictionary	thesaurus	Lit sheet	Whispered to neighbour	My own brain and past knowledge
Extra opinion:					

Appendix 8.1.2: Evaluating the process of making an orientating chart questionnaire.	
Questionnaire: Evaluating the process of making an orientating chart	
Question	Answer
1. Explain the decisions you made when you created your chart?	
2. If you added extra points, explain why you thought those extra points were necessary	
3. How do you expect the chart will help you write a high grade essay?	
4. Once you have looked at the other charts, which one would you prefer to use to help you write an essay and give a reason for that decision.	
5. What do you think the most important element will be when you write your essay next week?	

Appendix 8.1.3: Evaluation of Essay writing using an orientating chart					
Questionnaire: Evaluation of essay using orienting chart					
Question	Most of the time	A lot	Now and again	Once or twice	Not at all
1. How much did you use your orientating chart while writing your essay?					
2. How much did you refer to your essay plan while writing your essay?					
3. How much did you refer to the information sheet about apprentices?					
4. Which part of your orientating chart did you find most useful?					
5. Was there anything you want to have on the chart that wasn't there?					
6. How would you change the chart before you write the next essay?					
7. During the writing of this essay, what were you pleased about?					
8. During the writing of this essay, what were you frustrated about?					
9. Other comments about the essay writing process					
10. During this year since Sept, please list other subjects where you have had to write an essay.					

Appendix 8.1.4: Final evaluation questionnaire.					
Questionnaire: Final Evaluation of Gal'perin's Step wise theory of learning for essay writing (Oct 2016 – May 2017)					
Question: How have the following helped you to improve your essay writing?	**1** not at all	**2** A bit	**3** fairly helpful / good	**4** very good	**5** excellent
1. Motivational Stage: thinking about and understanding reasons for improving essay writing					
2. Orientating stage: 1 &2. Intended output and model: The expert essay					
3. Orientating Stage: 3. The means and objects of the action: deconstructing the essay and understanding the different elements needed to write an expert essay					
4. Orientating stage: 5 & 6. The general plan of action and the orientating chart					
5. Materialized stage: practicing different parts of the essay writing and different elements within it					
6. Stage of Overt Speech: Talking with other students about the essay development					
7. Stage of Covert Speech: working in silence to practice or develop ideas					
8. Writing the essay using the orientating chart					
9. Revising the orientating chart to write a literature essay					
10. How confident do you feel about writing essays in the future?					
Now please add your own comments about the essay writing process and project this year.					
What has been the most important part of this process, since Oct?					
What has helped you the most?					
What has been least successful?					
What has been most successful?					
Is there anything you are still confused about?					

8.2 APPENDICES – EXPERT ESSAYS

Appendix 8.2.1: 'Children do not need both biological parents' an expert essay

Children do not need both biological parents

For many years, children growing up in one-parent families have been viewed as different. In today's society many children have grown up to become emotionally stable and successful whether they have one or two parents to show them the rocky path that life bestows upon all human beings.

In our present year of 2017, split families and single parents are becoming more common. 42% of all marriages end in divorce and half of those divorcing have children under the age of 16 contributing to the 2.8 million lone parent households in the UK. Consequently, about 1 in four children of school age are living with only one biological parent. Since our society is not collapsing, people must realize that properly raising a child does not rely on the structure of a family, but the processes or values that are taught to these children as they learn to mature. Emotional, social and behavioral skills are not reliant on two biological parents.

However, there are some people who claim that the only way for children to gain full emotional and behavioral skills is to be raised by their biological parents. One child expert even stated in an article: "Children from single-parent families are more likely to have behavior problems because they tend to lack economic security and adequate time with parents". This simple statement suggesting that single parents create problem adolescents is absurd! Just because that parent might need to work full time to provide for themselves and their child, it does not mean that the child is lurking on the streets developing the skills of crime and degeneracy. This is disrespectful to all the hard working single parents who give time and energy into their children's lives.

Furthermore, some believe that having two biological parents means the child has more emotional attention making it easier to progress in life. This could be true, but not in all circumstances. It would not be beneficial at all to grow up in an abusive situation where the two parents did nothing but argue and put each other down. Naturally, a child who sees this from a very young age would surely only follow in their the footsteps. Children who are raised by one devoted and loving parent benefit much more than a child who has both parents showing them that fighting and arguing is acceptable.

Obviously, all children need emotional support and good role models, but that does not have to come from parents. Although I never had my father around while growing up, I had many positive male role models. My Grandfather was always there to help and guide me as I slowly blossomed into a young man. Anytime my mother had to work to support us, my grandparents or Uncle would step up and provide the time and attention I needed. Thus, I had the best support group.

As for stepparents and stepsiblings, despite the confusion and possible emotional stress it can cause some children when they have to adjust to the new family structure; it can and does work. Today, approximately twenty-five percent of children will spend at least some time of their growing-up years in a stepfamily. This seems beneficial for single parents because this new relationship enables them to receive help from their new partner both emotionally and financially. Significantly, it is not the structure that makes a difference to the young person's life in the long run; it is the emotional support and moral values given to the child. As long as both stepparents have an understanding that their family comes first and that it is important to communicate between themselves and with the children, a stepfamily can be great for children.

Finally, not all families are lucky enough to have two biological parents. Children need guidance, support and love from a responsible adult if they are to become emotionally stable and successful. Whatever the family structure, it must be one of respect and strong moral values, so the children can someday pass those on to their own family.

Appendix 8.2.2: 'Donald Trump' an expert essay

Donald Trump: not mad, but merely the arrogant boss we've all seen before. By Phil McDuff. The Guardian. 16 February 2017 (abridged)

For millennia, entitled men have had their boorish behaviour rewarded. Far from insane, the US president is the epitome of a depressingly recognisable type. Many of us have a "terrible boss" story. My best is from a few years ago when I found myself in Afghanistan (before Isis emerged) with a tiny film crew working on an independent Kurdish film. Our director was an example of monumental arrogance and total ignorance combine in one person. He would often call for things like a "medium wide close up" (which is not a thing) and then get angry when asked for clarification. On one particularly memorable day, we found ourselves standing on top of a mountain in freezing conditions explaining that the sun was not the moon. The entire thing was so baffling to us, at turns both hilarious and utterly terrifying, that it seemed crazy and insane.

As Trump ascends to the throne of god-king of the US, the desire to call him "crazy" has taken hold. Armchair psychiatrists take to every media outlet to inform us that he's a madman and dangerously unhinged. However, this easy mantra is unhelpful. I don't deny that the Trump phenomenon is worse than previous presidential administrations, but it is recognisable; it is not insane.

Essentially, we all know Trump. We've worked for him, served him in a restaurant, dealt with him in a call centre. He's the boss who emails you at 4.30pm on a Friday, doesn't pay overtime for the work you do all weekend, and then takes credit for it on Monday. He's the customer who refuses to tip because you didn't smile. As Professor Allen Frances, Psychiatrist, said: "He may be a world-class narcissist, but this doesn't make him mentally ill, because he does not suffer from the distress and impairment required to diagnose mental disorder. Mr Trump causes severe distress rather than experiencing it and has been richly rewarded, rather than punished for this behaviour". Significantly, what differentiates Trump is not his mad behaviour, but merely the height to which he has risen.

Indeed, the world is full of self-made used car salesmen harassing their secretaries in local government and they are rarely mad. They are, however, the result of systems that actively select for their bad characteristics. Over-confidence is selected for in managers because people think it suggests competence. Over-confident people generally have excuses for their failures (think of Trump crediting everything that goes well to his natural talents, and blaming everything that goes wrong on others). Bosses also select people like themselves for promotion; this subsequently creates work cultures where aggression and overconfidence become the mark of a "good leader" regardless of results. Furthermore, Trump's aggressive, sexually predatory misogyny is also not uncommon. We have a system of values entrenched over millennia that encourages leaders to be aggressive and dominant.

Many might argue that it cannot be "mad" to perform in a way that is encouraged and rewarded. For example, UKs own Nigel Farage, a man cut from the same cloth as Trump, is given endless media coverage. This, some might argue, is the way of the world. We, the public, want confident leaders; we give them what they want when they behave in an arrogant, boorish and intimidating manner.

Therefore, Trump's ascension is not the result of a "depraved madman" accidentally ending up in power, but of basic, widespread and wholly predictable cognitive biases. Our rush to brand him as an insane dictator is also a bias – we wish to believe that we couldn't have seen this coming. We do not want to believe that our actions contribute to the sadistic policies of the Trump administration. This, in itself, is an act of self-protection. Trump the madman is a soluble problem: we just replace him. But Trump the perfectly sane result of a deeply broken system, is far more terrifying; this is the real reason why we are putting so much effort into inventing reasons it cannot be true.

Appendix 8.2.3: 'Homework is a threat' an expert essay

Homework is a threat to students' freedom

Essentially for the last century students have thought that homework was a threat to their freedom. Undoubtedly homework is a threat to the freedom of students. Many students feel that homework takes their freedom and they don't want to do homework. In fact, it does more than take their freedom it obviously denies them freedom. Homework, in itself, denotes a threat.

Many of us have a bad homework story. My best is from middle school, and exhibits my point very clearly. Essentially, I found myself trying to learn vocabulary for shopping, which the teacher had given in class, only to be confronted with a test, the next day, on vocabulary for the home. Not only had the teacher had given us the homework for the wrong class, but the wrong year group too. This anecdote unquestionably reinforces the idea that Homework is pointless.

Some might argue that this is clearly a mere anomaly, a mistake made by a tired teacher. However, this would be a simply statement. I don't deny that teachers are often tired, but to suggest that this story signifies human error rather than the assault of homework on the young student is saddening and disheartening. This story evidently illustrates the banal distribution of homework and clarifies the irrelevant nature of homework.

Certainly, Blake in 1879 could have possibly written the ultimate poem about students and their attitude to work. Blake argues that school work 'drives all joy away' and that students sat 'drooping' during an 'anxious hour' over their work. Blake seems to exaggerate the theme with his metaphor, 'how can a bird that is born for joy, sit in a cage and sing?' but I think all students can certainly empathise with this feeling. This metaphor demonstrates how freedom is removed from the student; in a sense the student is imprisoned until the work is completed.

Appendix 8.2.4: 'Zoos shouldn't be jails' an expert essay

Zoos shouldn't be jails – let's reimagine them and enjoy animals in the wild. By Jules Howard. The Guardian. 28 February 2017 (abridged)

It really is a damning report. Of more than 1,500 animals kept at Cumbria's South Lakes Safari zoo between December 2013 and September 2016, 486 were found to have died. Emaciation, hypothermia, accidental electrocution, gastrointestinal infections, a decomposing squirrel monkey found behind a radiator, two dead snow leopards. At the same time, the zoo was hit with a £255,000 fine for health and safety breaches after one of its keepers was mauled by a Sumatran tiger. Next Monday we shall find out whether Barrow in Furness borough council is going to renew the zoo's licence. Meanwhile animal rights activists, wildlife conservationists and pro-zoo campaigners will watch from the wings, ready to renew that perennial debate: are zoos worth it? Are they worth the fuss? Do they really help save animals in the wild? Is there more they can do?

In the past decade I have seen the best of zoos, I think. I have seen zoos mobilise conservation work in the far reaches of the world to save species few people had ever thought worth the bother. I have seen zoo staff hand-rearing threatened spiders, and I have released the creatures' progeny into the wild with my own two hands. I have worked with zoo scientists who collect and analyse garden frogs and birds day in, day out, monitoring the spread of non-native diseases across Britain.

But I have also had the kind of moments that I suspect you have had when visiting zoos with children. Moments when I have seen my kids go face to face with a playful chimp on the other side of the glass, and become startled at the likeness between them. Moments when I have locked eyes with a captive gorilla and seen sadness or worse, utter contempt. An intense, dark, loathing stare as it sat looking at me from an artificially-lit wet room while the rain fell outside. A zoological breaking of the fourth wall. As long as wild apes are saved, perhaps the captivity of this creature is worth it, we think – before carrying on to the next exhibit.

Many of our best zoos (particularly those associated with the British and Irish Association of Zoos and Aquariums) have boundless energy for the conservation cause. They offer educational workshops for schools and families. Their displays and literature are carefully considered. They captive-breed animals with immense consideration and expertise, building up stock for (sadly infrequent) release back into the wild. Zoo staff care, in most cases, deeply for their collections.

But are care and a commitment to conservation enough on their own? Do they justify the existence of zoos? Time is, after all, running out. Just last week we learned that one in five species on Earth now faces extinction, and that this will rise to 50% by the end of the century unless we find better and more effective ways to save them. Although the zoo model has changed a great deal since the days of chimps' tea parties and punters riding the exhibits, it is still fundamentally a place where people pay to look at animals. Could zoos evolve in a new direction before it is too late?

What might a utopian zoo look like? I find myself imagining urban zoos that use augmented reality, where visitors marvel at computer-generated creatures like mammoths from the past, and compare their fate with those of modern-day threatened species. Zoos without fences, where tigers and polar bears and other simulated creatures walk among the people. Zoos in cities in which visitors put on VR goggles and watch herds of migrating wildebeest in Africa. Zoos with live feeds on big screens that show minute-by-minute footage of the wild treasures of the deepest Amazon. Zoos where urban nature has infilled the exhibits of old, where former penguin ponds become great crested newt ponds. A world where "Be a keeper for the day" schemes are replaced by "Be an elephant ranger for a day" schemes, where zoo visitors in Regent's Park fly remote-controlled drones over elephants and rhinos in Africa, protecting them from poachers.

You can laugh, but what's so bad about ideas like these? They involve no captivity. There are no animals to feed and otherwise look after. The conservation message would come across far louder and clearer. "No: people want to see *live* animals!" The purists will grumble. But do zoo animals live and breathe and reproduce like wild animals? I'm no longer sure. Innovation should be a hallmark of the modern zoo, not

overstretched collections where well-intentioned curators let innocent animals die, the hopes of their species miscommunicated to an often indifferent public.

Appendix 8.2.5: 'Why the world needs Zoos' an expert essay

Why the World needs Zoos. Dr Dave Hone. The Guardian. 08 March 2017 (abridged)

I have written before about the importance of zoos and the role they have to play in the world for conservation and education. They are in particularly important for endangered species – many animals are critically endangered in the wild and may go extinct there soon but are going strong in zoos. Many others are already extinct in the wild and only survive because of populations kept going in captivity. Even those critical of zoos often recognise this role and that it is better to have species preserved somewhere than be lost for all time. However, even species that are common can come under severe threat very quickly or without people realising.

Take the ring-tailed lemur of Madagascar for example. This animal is almost ubiquitous in zoos and few do not keep groups of these pretty primates as they breed well in captivity and the public are fond of them. However, despite their high numbers in collections around the world, they are under severe threat in the wild. A recent survey suggested that a huge 95% of the wild populations have been lost since 2000. This is clearly catastrophic and also means that the remaining individuals are greatly at risk. One bad year or a new disease could wipe out those that are left, and small and fragmented populations will be vulnerable to inbreeding so even a single loss can be keenly felt.

Such trends are not isolated. Giraffe are another species that are very common in zoos and unlike the lemurs are very widespread being found in numerous countries across much of sub-Saharan Africa. Anyone who has been on safari in Kenya, Tanzania, South Africa or plenty of other countries will have had no trouble in seeing plenty of them in the wild and yet giraffe populations have gone down by a third in the last thirty years. While less dramatic than the lemurs, this is obviously a major loss and again, whole populations (which some scientists think are in fact unique species) are on the verge of extinction.

Cheetahs too, despite protection and efforts to support populations, are showing a major decline in their wild populations, primates as a whole are doing badly (it is suggested some 60% of species are at risk) and that's on top of the major crisis facing huge numbers of amphibian species. Many other species are probably facing sudden drops in numbers and some estimates are particularly worrying with suggestions that 50% of species could be gone at the end of this century. Conservationists struggle to monitor even species known to be vulnerable, so it is easy to see why common species might be overlooked especially if the perception is that they are not at risk because there are large numbers. Even a dramatic local loss might be overlooked on the assumption they are populous elsewhere but clearly that's not always the case.

Ongoing and future issues from climate change (more extreme weather events, as well as things like overall warming and sea level changes) can have dramatic and unexpected effects on wildlife and we will likely struggle to predict which might be at risk. The numbers of species showing major losses, and the number that we overlook until things are already critical is only likely to rise. A new study suggests that climate change has already harmed over half of all mammal species on the endangered species list for example, and that is only likely to increase as more species are put under pressure from climate change and other environmental pressures.

In short, while zoos do provide a critical reservoir for endangered species, many other animals may yet become endangered very soon, or already are and we don't know about it. Those species that are held in zoos are already protected from any such events and trends. In may not be long until ring tailed lemurs and many other species are only held in zoos and their loss from the world would be otherwise both tragic and irreversible.

There will, I suspect, always be resistance to the arguments for keeping animals in captivity and I will not defend those bad zoos desperately in need of improvement or closure. But if we wish to keep any real measure of biodiversity on the planet, we may lean on zoos and aquaria far more than many realise. If even common and popular species can lose a huge percentage of their populations in a few years, it may be too late to save them with even the best breeding programs or conservation efforts in the wild. As seen here,

too often we do not even know a species is under threat until their numbers have crashed to dangerously low levels and this is a trend that is only likely to continue.

8.3 APPENDICES – INFORMED CONSENT

Appendix 8.3.1: Parental Informed Consent

Dear Parent / Guardian

You are being asked to give consent for your son/ daughter to be a participant in a research study concerning the development of techniques to improve essay writing for students. We hope and expect this research to facilitate and support students to develop higher quality of writing and achievement a benefit for them in their GCSEs and future A levels. If this research is successful the model may be rolled out across our school and shared with other schools in the area.

This study is being conducted by one of our teachers, Ms [redacted], as part of her PhD research with University of Bath under the supervision of Dr. [redacted]. The study will be conducted during year 9 English lessons taught by Ms Roberts and some History lessons taught by [redacted]

This research will be conducted during some English and History lessons throughout the academic year of 2016 – 2017. Your child will be asked to contribute ideas about essay writing during class discussions, record ideas about essay writing into an audio digital recording device and write essays which will be assessed according to the school assessment criteria. Your child, as part of the class, may be asked to try out a number of different ways of writing essays, but no more than is normally expected. In addition, general assessment data, available on the school system, appertaining the student, will be referred to as part of this research. [redacted] does not anticipate there will be any extra work requested of students other than would be normally expected of a Year 9 class during their preparation year for GCSEs.

All responses will be kept confidential, as in only colleagues involved in the review of this research at [redacted] School and Bath University will see them. No individually identifying information will be reported and all participants will be given pseudonyms. Data collected will be kept secure, at all times and digital data will be password secure. All BERA (British Educational Research Association) guidelines will be followed.

Participation is only through consent. If at any time you or your child decide not to continue, you may simply say so and their contributions to this study will no longer be collected or recorded, with no information or details concerning them included in this research. You can decide not to give consent, or to withdraw from the research at any time, without detriment. In addition, all students will be asked for voluntary consent in class, by signing a similar letter.

For more detailed information, you may contact [redacted] by telephoning or emailing the school. Please return the consent below to [redacted] here at [redacted] School by **Monday 19th September**.

Yours sincerely,

Ms [redacted]

Consent:

I …….(parent / guardian name) have read and understood the written details above and agree to my child …….. (name of student) participating in this research as part of their normal English or History class.
Signed:…….Dated:……

Appendix 8.3.2: Student voluntary consent

Dear Student

You are being asked to give voluntary consent to be a participant in a research study concerning the development of techniques to improve essay writing. We hope and expect this research to facilitate and support you, as a student, to develop higher quality of writing and achievement, a benefit for you in their GCSEs and future A levels. If this research is successful the model may be rolled out across our school and shared with other schools in the area.

This study is being conducted by [redacted], as part of her PhD research with University of Bath under the supervision of Dr. [redacted]. The study will be conducted during your year 9 English lessons taught by Ms [redacted] and some History lessons taught by Mr [redacted].

This research will be conducted during some English and History lessons throughout the academic year of 2016 – 2017. You will be asked to contribute ideas about essay writing during class discussions, record ideas about essay writing into an audio digital recording device and write essays which will be assessed according to the school assessment criteria. As part of the class, you may be asked to try out a number of different ways of writing essays, but no more than is normally expected. In addition, general assessment data about you, available on the school system, will be referred to as part of this research. Ms [redacted] does not anticipate there will be any extra work requested other than would be normally expected of a Year 9 class during their preparation year for GCSEs.

All responses will be kept confidential, as in only colleagues involved in the review of this research at [redacted] School and Bath University will see them. No individually identifying information will be reported and all participants will be given pseudonyms. Data collected will be kept secure, at all times and digital data will be password secure. All BERA (British Educational Research Association) guidelines will be followed.

Participation is only through consent. If at any time you decide not to continue, you may simply say so and your contributions to this study will no longer be collected or recorded, with no information or details concerning you included in this research. You can decide not to give consent, or to withdraw from the research at any time, without detriment.

For more detailed information, you may ask [redacted] at any time. Please sign the consent below.

Yours sincerely,

Ms Miranda Roberts

<u>Consent:</u>

I ……. *(your name)* have read and understood the written details above and agree to participating in this research as part of my normal English or History class.

Signed:…….

Dated:……

Appendix 8.3.3: Staff consent

Dear Member of Staff

You are being asked to give voluntary consent to be a participant in a research study concerning the development of techniques to improve essay writing. We hope and expect this research to facilitate and support students to develop higher quality of writing and achievement, a benefit for their GCSEs and future A levels. If this research is successful the model may be rolled out across our school and shared with other schools in the area.

This study is being conducted by Ms [redacted], as part of her PhD research with University of Bath under the supervision of Dr. [redacted]. The study will be conducted during year 9 English lessons taught by [redacted] and some History lessons taught by [redacted].

This research will be conducted during some English and History lessons throughout the academic year of 2016 – 2017. You might be asked to contribute ideas about essay writing and essay critieria during discussions which might be recorded either manually or digitally.

All responses will be kept confidential, as in only colleagues involved in the review of this research at [redacted] School and Bath University will see them. No individually identifying information will be reported and all participants will be given pseudonyms. Data collected will be kept secure, at all times and digital data will be password secure. All BERA (British Educational Research Association) guidelines will be followed.

Participation is only through consent. If at any time you decide not to continue, you may simply say so and your contributions to this study will no longer be collected or recorded, with no information or details concerning you included in this research. You can decide not to give consent, or to withdraw from the research at any time, without detriment.

For more detailed information, you may ask [redacted] at any time. Please sign the consent below.

Yours sincerely,

Ms [redacted]

<u>Consent:</u>

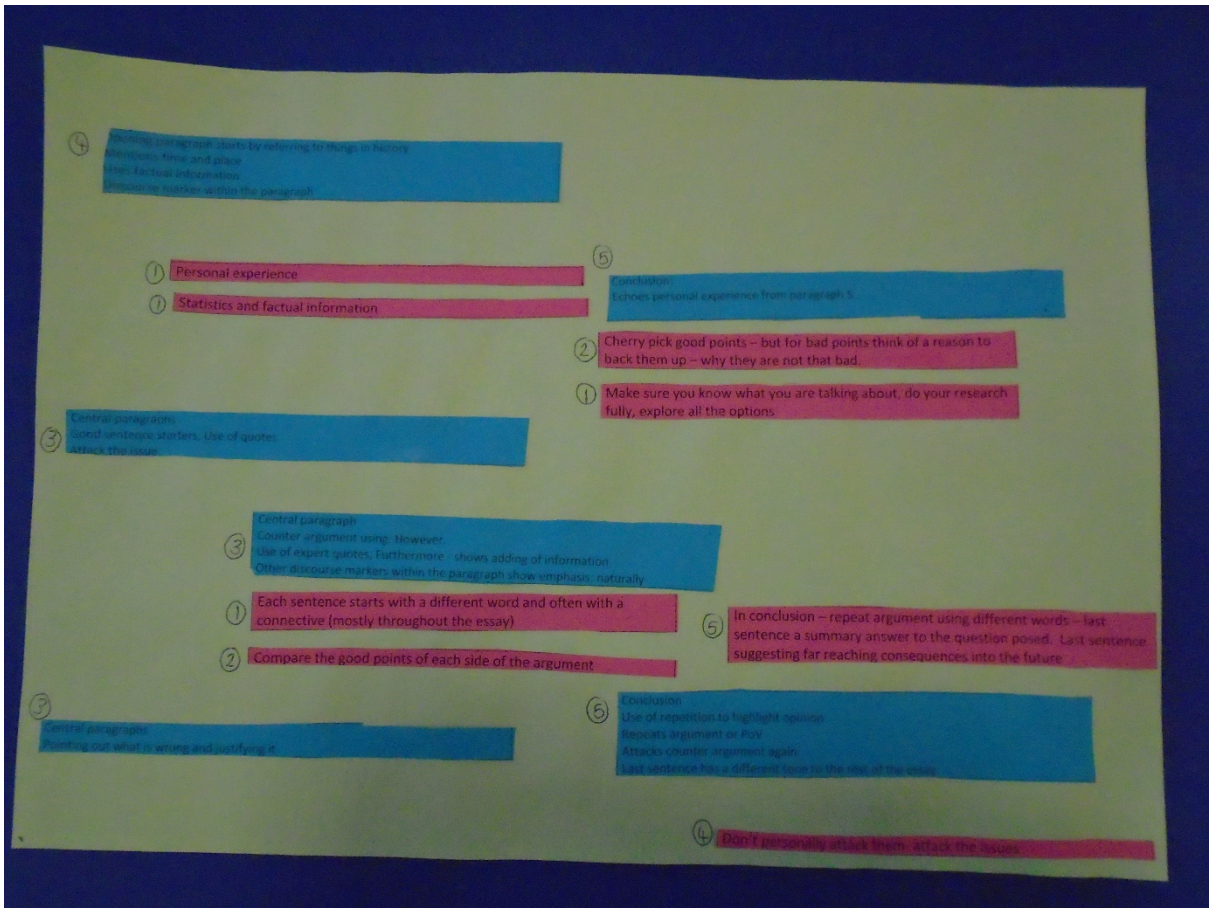
I ……. *(your name)* have read and understood the written details above and agree to participating in this research.

Signed:…….

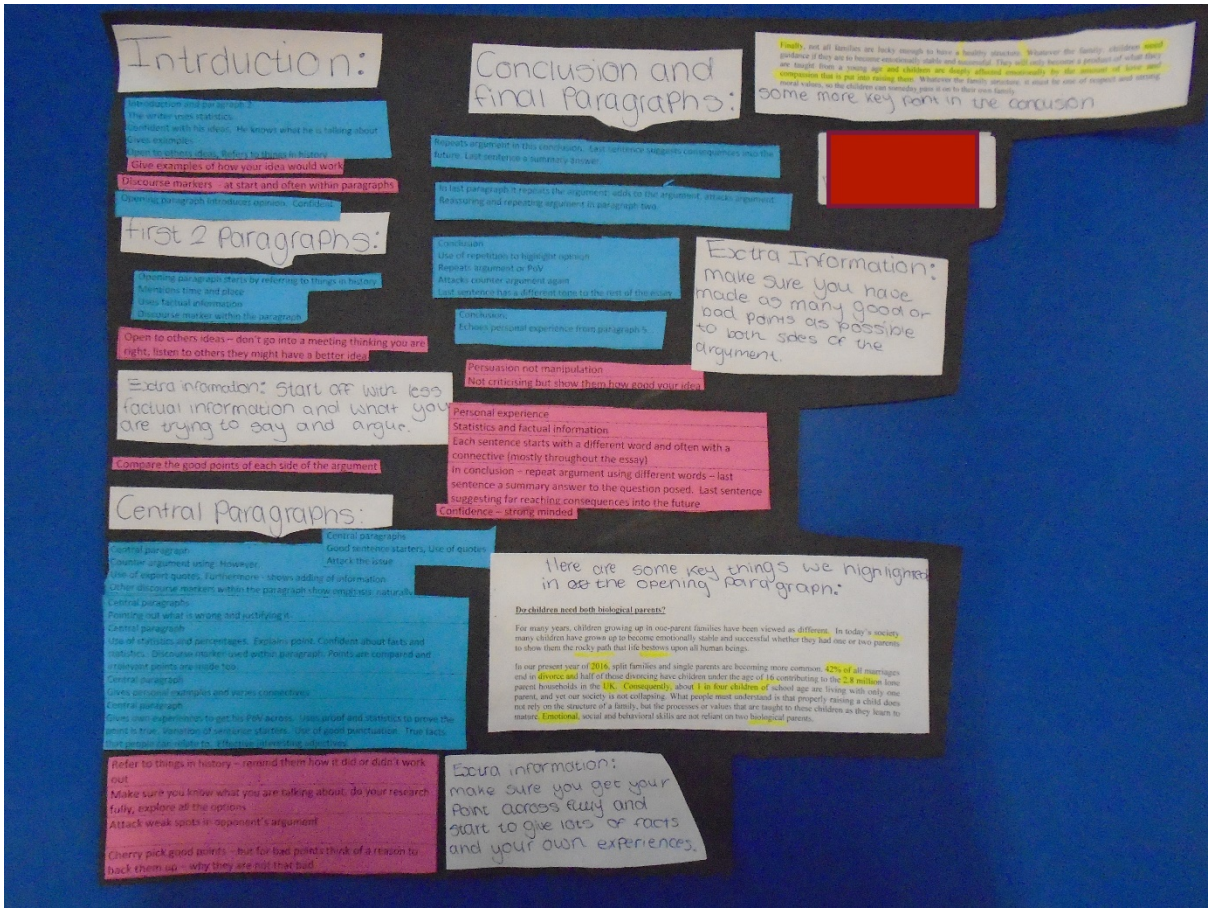
Dated:……

8.4 APPENDICES – ORIENTATING CHARTS

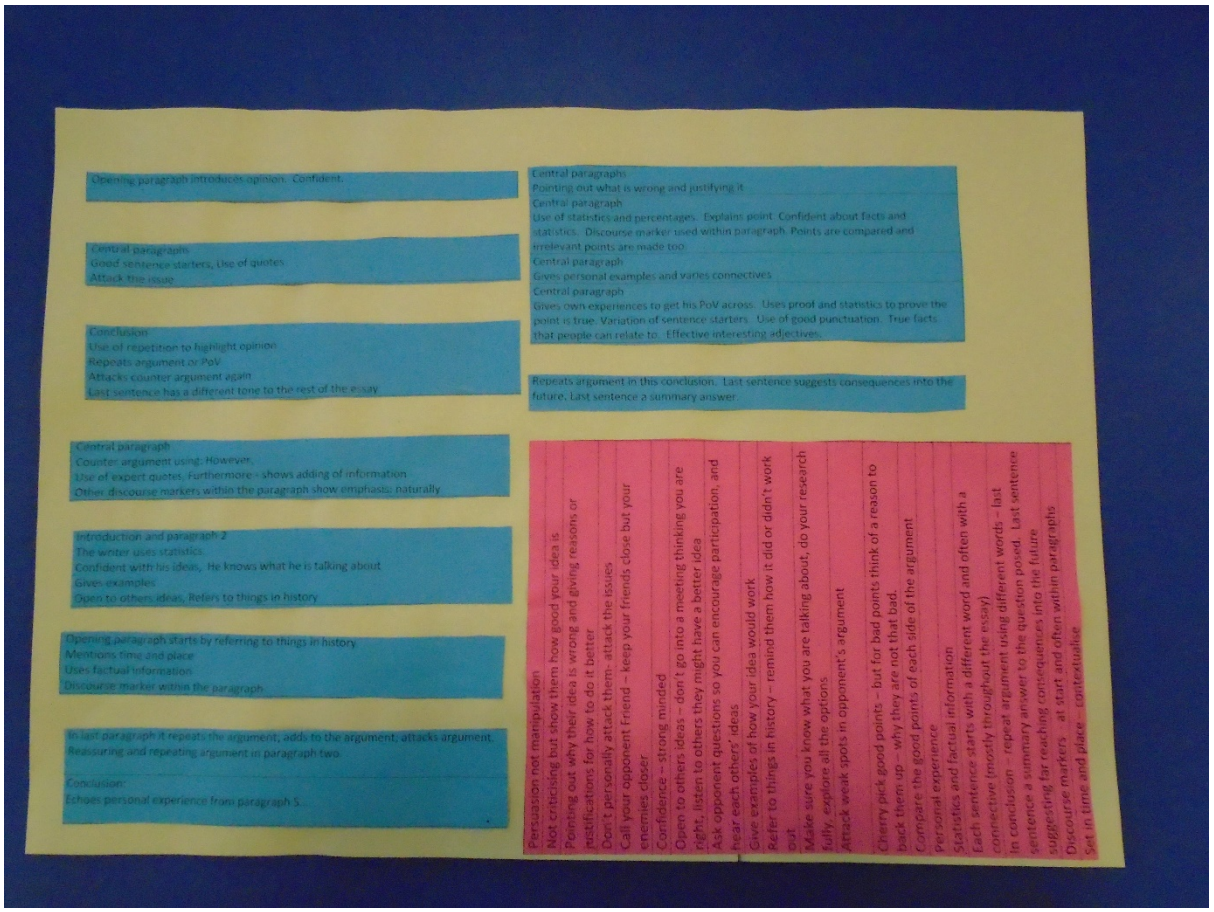
Appendix 8.4.1: Orientating chart created by Bean and Mia



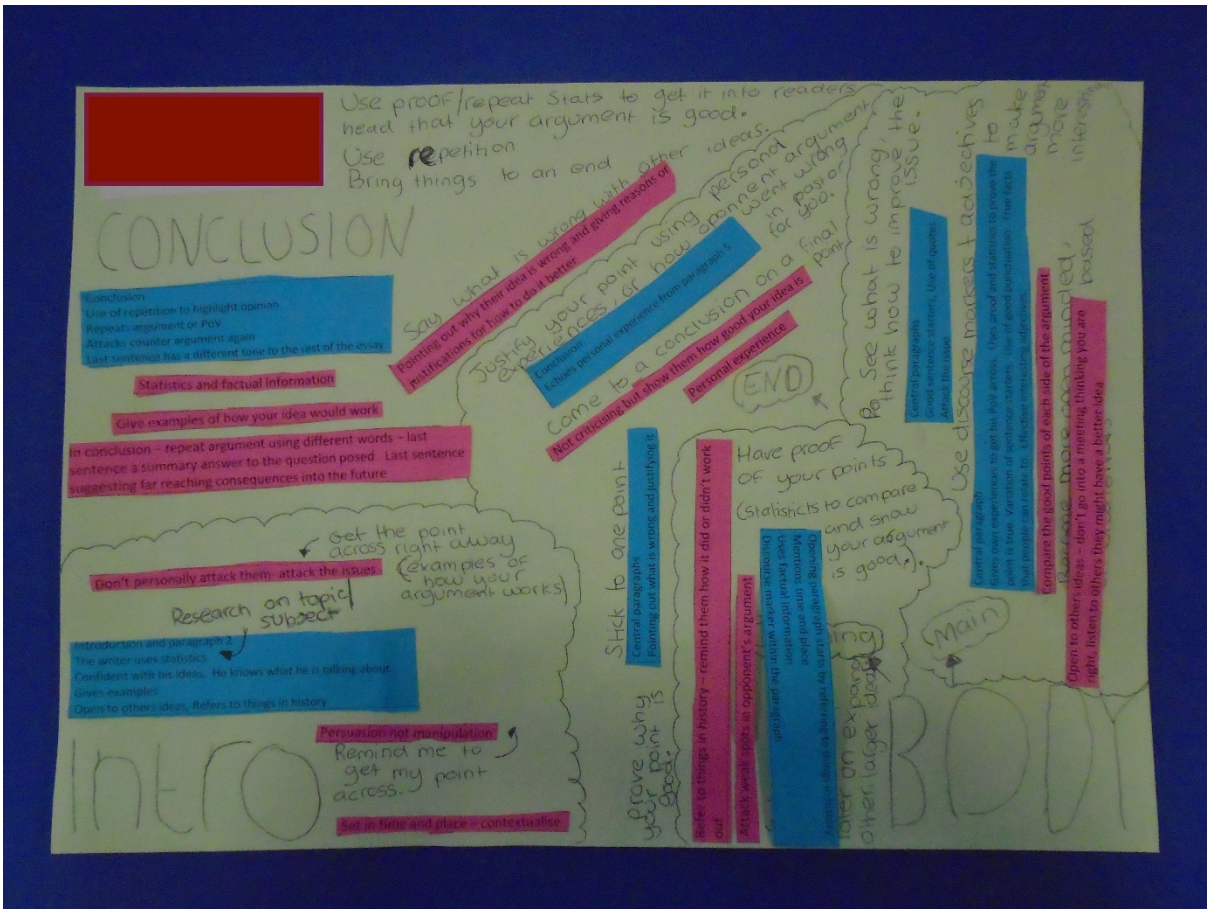
Appendix 8.4.2: Orientating chart created by Claire and Mildred



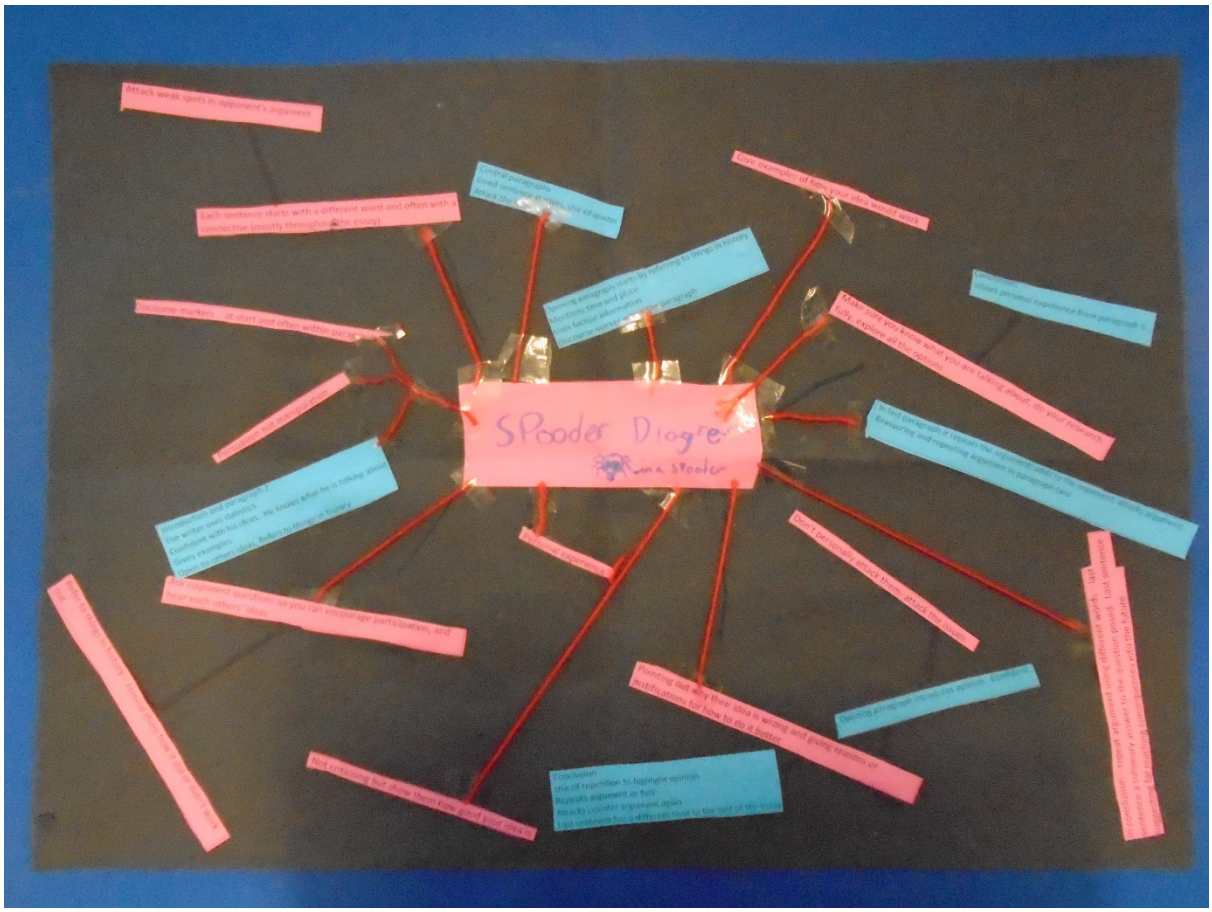
Appendix 8.4.3: Orientating chart created by Ferry



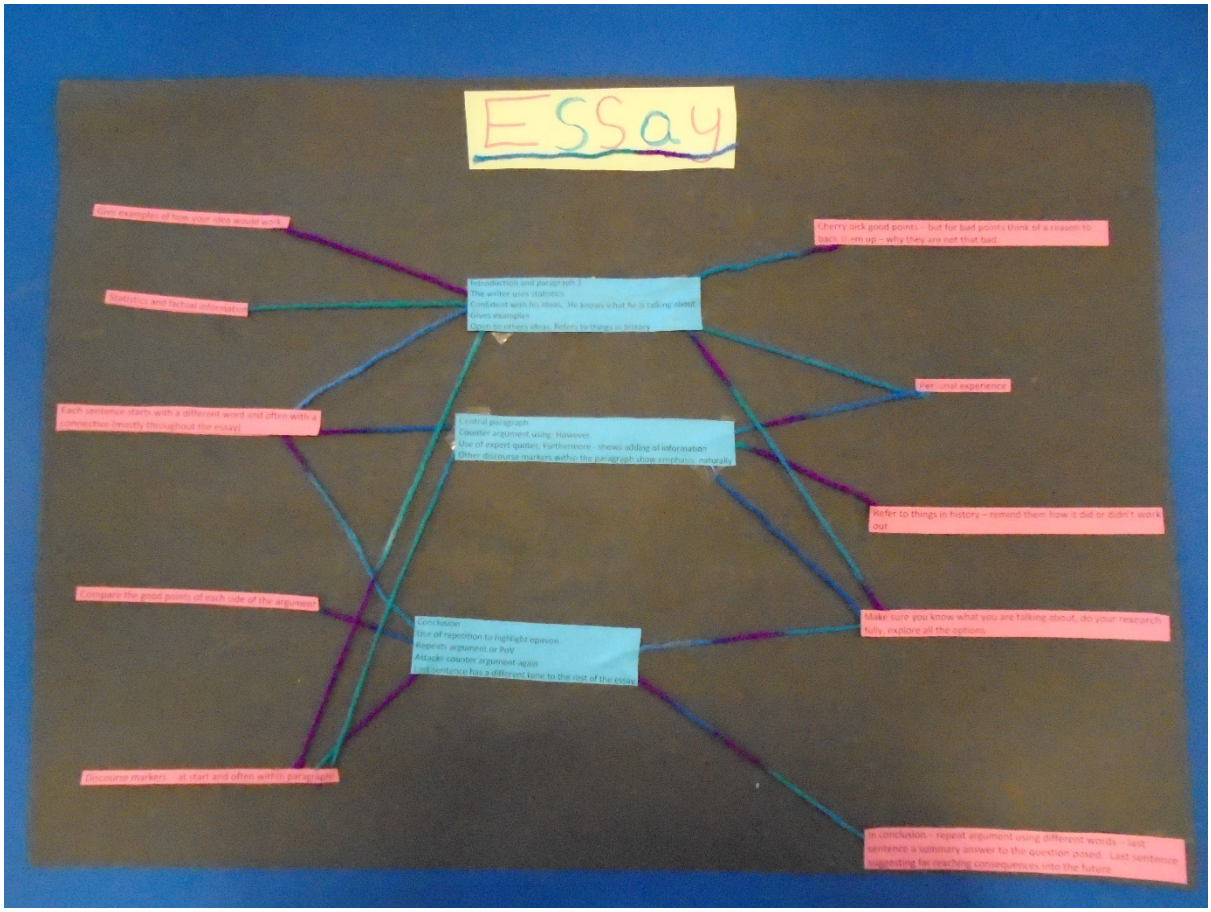
Appendix 8.4.4: Orientating chart created by Gilph



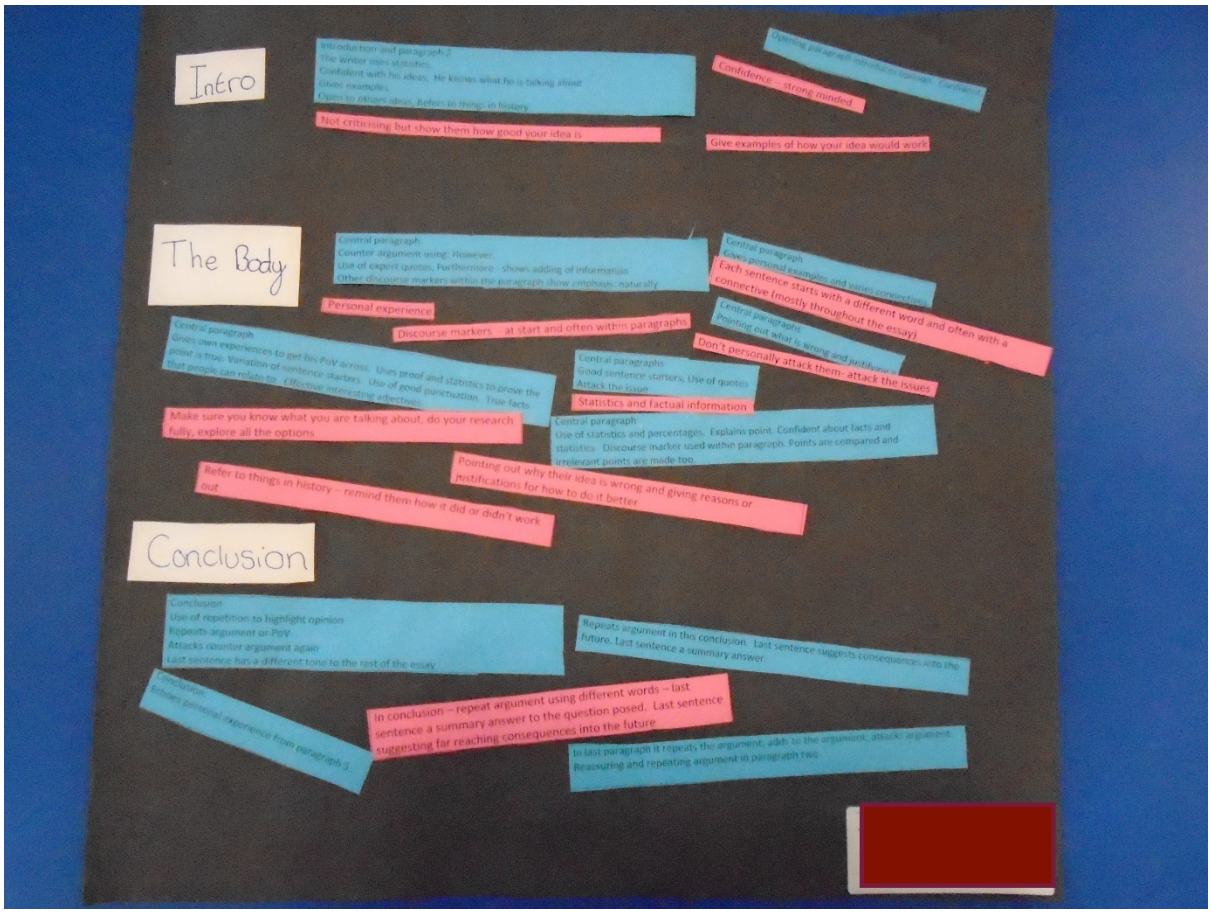
Appendix 8.4.5: Orientating chart created by Juan and Finn


Attack weak spots in opponent's argument
Each sentence starts with a different word and often with a connective (mostly throughout the essay)
Some examples of how Hitler's words work
Linking paragraph starts by referring to ideas in history
Mentions time and place
Uses factual information
Uses name
Makes sure you know what you are talking about in your essay
Fully explore all the options
Uses personal experience from paragraph 1
Sentence starters
Sentence variation
Introduction and paragraph 2
The writer uses statistics
Confident with his ideas. He knows what he is talking about
Uses examples
Quotes other people. Refers to things in history
Uses questions
Uses rhetorical questions to win you over, encourage participation, and hear each others ideas
In last paragraph it repeats the argument, adds in new evidence, reminds, reminds, argument
Reassuring and repeating arguments in paragraph two
Don't personally attack your opponent, attack their ideas
Pointing out why their idea is wrong and giving reasons or solutions for how to fix it better
Linking paragraph - introduces ideas
Conclusion
Use of repetition to highlight opinion
Repeats argument or duty
Attacks counter argument again
Last sentence has a different tone to the rest of the
Sentence starters
Sentence variation
Sentence starters
Sentence variation
Sentence starters
Sentence variation

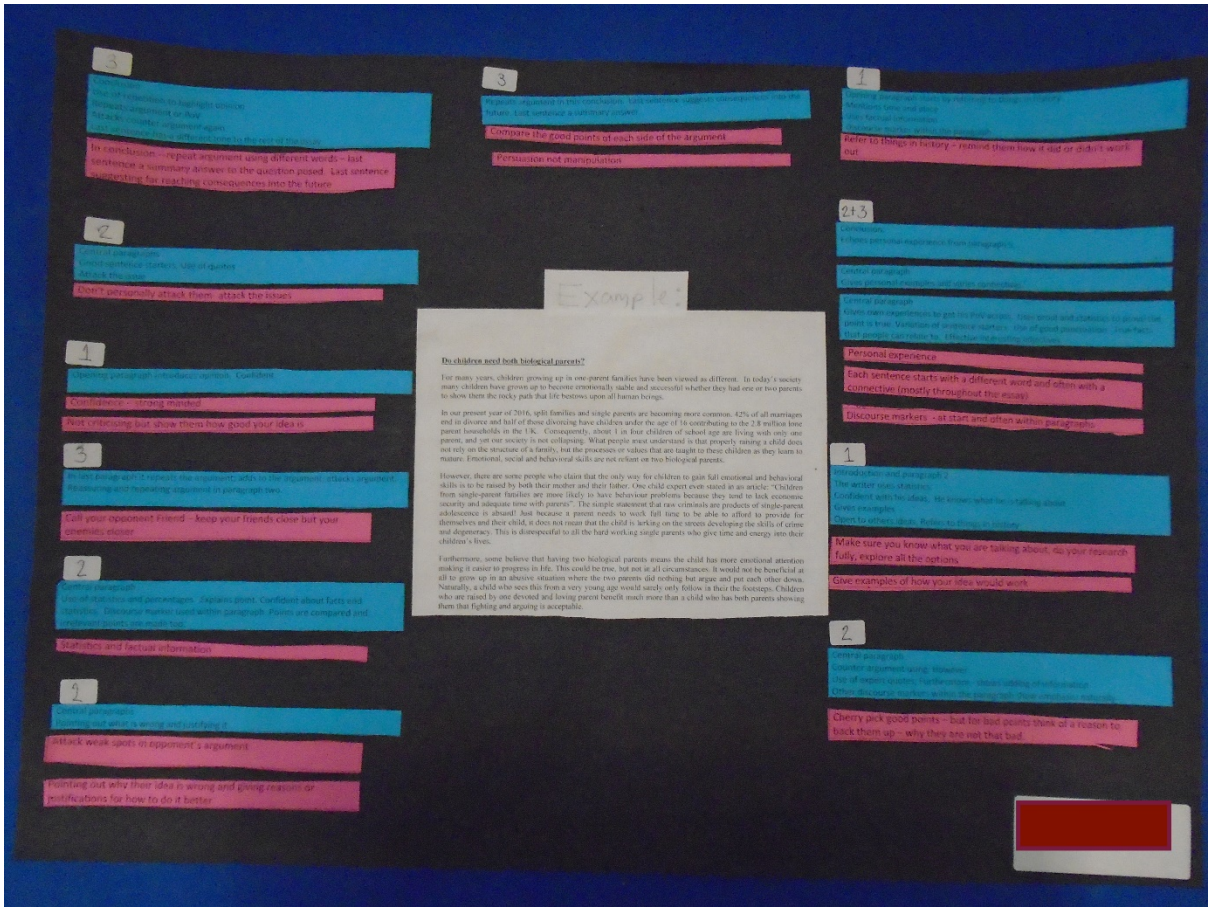
Appendix 8.4.6: Orientating chart created by Naruto, Alexa and Monika



Appendix 8.4.7: Orientating Chart created by Richard, Jay and Jemma



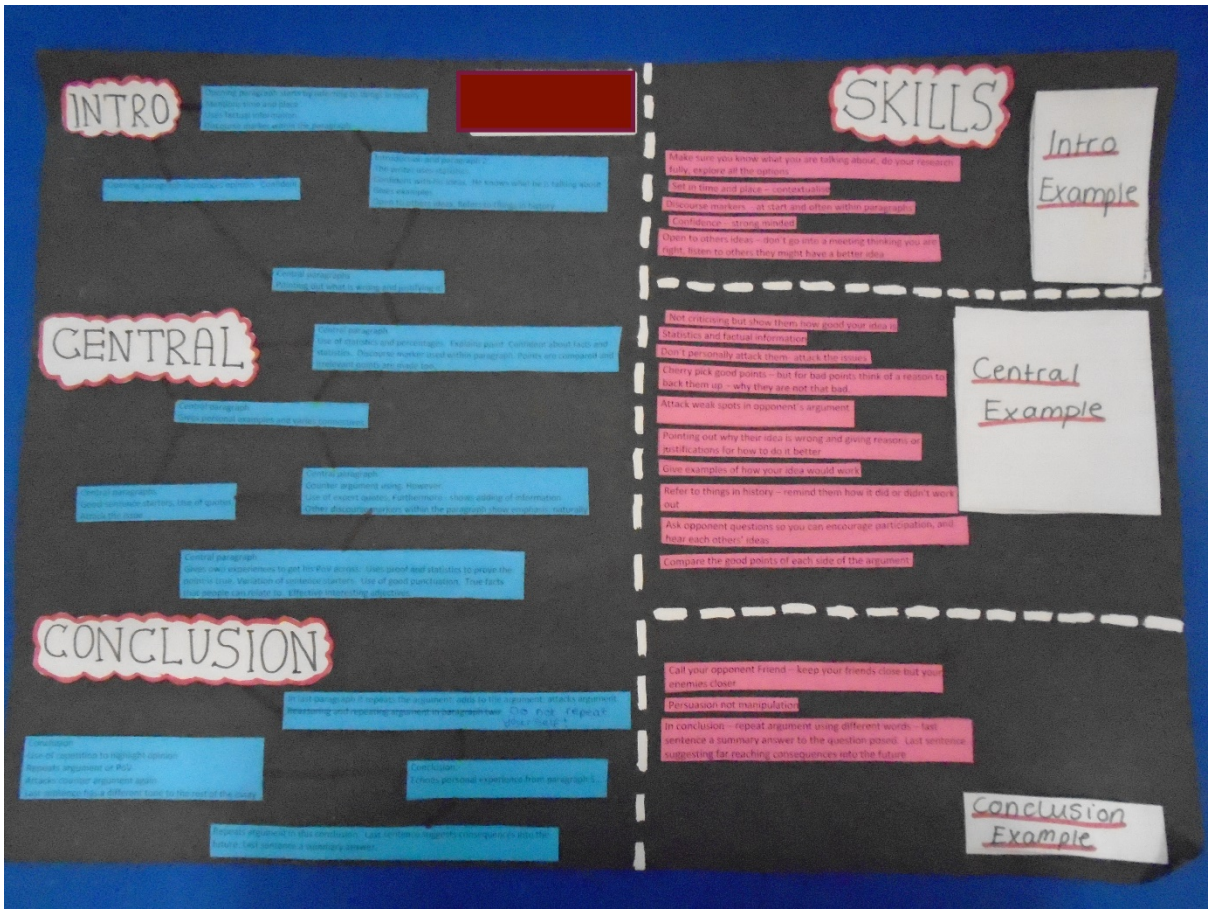
Appendix 8.4.8: Orientating chart created by Robert and Lottie



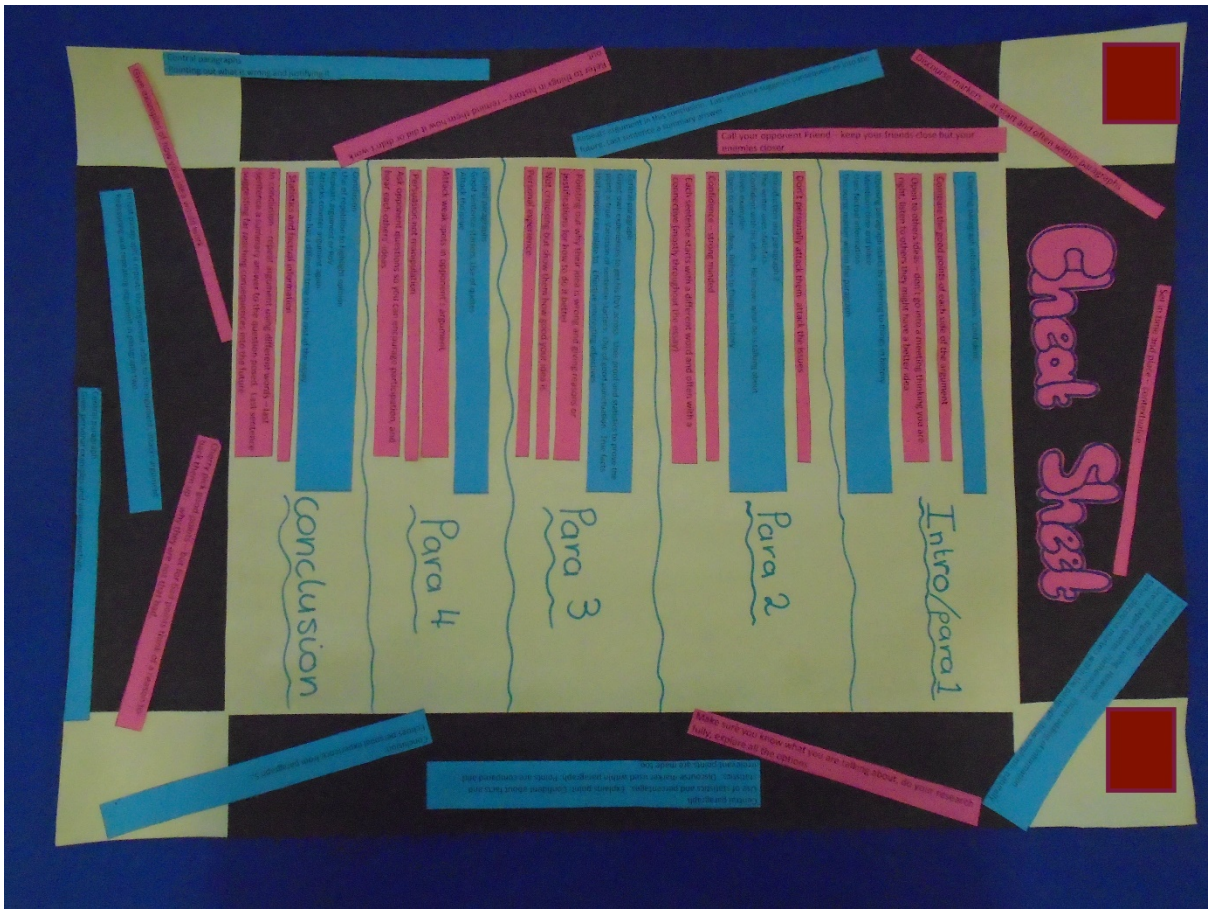
Appendix 8.4.9: Orientating chart created by Robin and Kim


Compare the good points of each side of the argument
Open to others ideas – don't go into a meeting thinking you are right, listen to others they might have a better idea
Make sure you know what you are taking about do your research
Don't personally attack them- attack the issues
Each sentence starts with a different word and often with a connective (mostly throughout the essay)
Pointing out why their idea is wrong and giving reasons of justifications for how to do it better
Cherry pick good points – but for bad points think of a reason to back them up – why they are not that bad.
Statistics and factual information
Persuasion not manipulation
Attack weak spots in opponent's argument
Ask opponent questions so you can encourage participation and hear each others' ideas
Refer to things in history – remind them how it did or didn't work out
Discourse markers - at start and often within paragraphs
In conclusion – repeat argument using different words – last sentence a summary answer to the question posed. last sentence suggesting far reaching consequences into the future
Not criticising but show them how good your idea is
Conclusion
Use of repetition to highlight main argument or POV
Attacks counter argument again
Last sentence suggests consequences into the future
Control Paragraph
Control paragraph
Control paragraph
Control

Appendix 8.4.10: Orientating chart created by Vanessa and Jessie



Appendix 8.4.11: Orientating chart created by Zoe and Rosie



Appendix 8.4.12: Orientating Chart Template created by me (the researcher)			
Orientating Chart for SCOBA 2 Name: _____			
Paragraph	Elements to include	Suitable vocabulary	Sentence starters
Introduction			
Development paragraph			
Personal experience paragraph			
Development paragraph			
Counter argument paragraph			
Development paragraph			
Development paragraph [maybe add]			
Conclusion			

8.5 APPENDICES – POWER POINT PRESENTATIONS

Appendix 8.5.1: Baseline power point presentation

EFFORT

What is effort and what does it mean to you?

Thinking Effort
The Brain is Like a Muscle

- New research shows that the brain is similar to a muscle – it changes as you exert mental effort. For example, when you lift weights, your muscles get bigger and stronger. A person who can only lift 20 pounds when they start exercising can get strong enough to lift 100 pounds after working out for a long time. That's because the muscles become larger and stronger with use; and, if you stop exercising, the muscles will shrink and get weaker which is why people say, "Use it or lose it!"

The Brain's Potential for Growth is HUGE

- Scientists used to think children's brains developed through adolescence and then they stopped; now we know that is not true. An experiment was done with adults who were not jugglers. Half the group was taught to juggle by learning strategies for juggling with a teacher. The other half were just shown how to juggle and then left by themselves to practice.
- Results?
- The group that received strategy instruction, encouragement to learn from their mistakes, and spent a lot of time practicing with the teacher and with each other got much better at juggling. The other half did not learn to juggle and many even stopped trying.
- Next scientists used a brain scanner to compare the brains of the two groups of people. They found that the parts of the brains that control juggling skills – the visual and motor areas – grew in the adults who learned to juggle. Their brains actually changed as they acquired these new abilities. Before the study these people said that they couldn't juggle. But, when they had good strategies for practicing and they kept trying, they learned and this physically changed their brains.
- All brains can learn and grow and change. All brains can get smarter through practice and effort

Create an effort line for your effort into …

- At the front: 100%
- At the back: 0%

- Where are you?

Essay writing

05-10-16

Objectives

- To write an essay from scratch without any help or support form the teacher or each other.
- To create baseline essay of what you can do without specific teaching or support from which we can then see your progress over the year.
- To write about five paragraphs as well as you can.
- To not be worried or concerned that this will look like a failure or in any way cause the teacher to consider you not capable of writing an essay.
- To not fear the task, but have a go anyway.

At the end of the year, you will be given another chance to write this essay.

Essay title: Students: school or work?

- The following statement has been made by your local councillor:
- *"Children of school age should not be working at all. They should be focused on their school work and helpful to their parents. Working for money comes later."*
- The councillor will take part in a debate at your school. Write a speech in which you argue your point of view in response of this statement.

Spend the first 5-10 minutes planning your ideas before you write

Appendix 8.5.2 : Stepwise Procedure One power point presentation

Writing essays

Gal'perin'sStepWise Procedure (1969)

Objectives

- To develop an understanding of the mechanics of argument essay writing
- To develop a plan– orientating chart– to guide you through the essay writing process

Motivation

Point of View

- When and where is it important to get your Point of View across to others?
- In what circumstances, later in life, might you need to present your point of view?

Skills needed to argue

- What skills are needed to argue and put your point of view across effectively without being offensive to your opponent?

Orientation

Gal'perin's step wise learning theory

1. Motivational stage – a preliminary introduction to the learner of the action and mobilization of the learning outcome
2. Orientating stage: construction of the orientating basis of the action (both general and complete)
3. Materialized stage – mastering the action using materials or physical objects
4. Stage of Overt speech – mastering the action using verbal sequencing
5. Stage of covert speech – mastering the action at the level of speaking to oneself
6. Mental stage – transferring the action to an automatic level

Do children need both biological parents to be successful and emotionally stable?

- How would you argue this?
- Think of points and ideas. Consider your own, your friends, or the characters' situation in the novel TKAM.

Expert argument essay

- Deconstruct this essay.
- What has the writer done in each paragraph to:
- argue their point of view?
- get a top level grade?

Add more points to our skills list

This is a model essay which we can work towards achieving by the end of the year

SCOBA

Scheme of complete orientating basis of the action

Means of the action and Objects of the action

- If we are going to write an essay like this: what will you need to complete the task?
- What objects orimplements or necessary knowledge will you need to complete this task?

Plan and sequence of the action

- Separate out and sequence each section of the essay and what you need to do within each section.

This information will enable us together to create a scaffold or orientation chart to guide you through the essay writing process.

Consider your learning needs

- Look at the plan, the means and the objects needed for the essay writing process
- Identify areas which you need to improve in order to be successful

Orientating chart

The mechanics of the process

Creation of an orientating chart

- A cheat sheet
- A 'terrible thing to look at'
- A clear picture
- What do YOU need on a sheet to enable you to write an argument essay like that model on any topic?

You create an orientating chart for this essay

- Use the skills sheet (class suggestions)
- Use the class essay deconstruction sheet (from expert essay)
- CUT AND PASTE IN ORDER TO ENABLE YOU TO WRITE A MODEL ESSAY
- Add other elements you think are necessary in felt pen.

Now identify areas in which you need to improve

- Use the sticky note to tell me what you think you need more teaching in order to achieve it proficiently

Evaluating the process of making the chart

- Fill in the evaluation form: Questions 1-3
- Then look at other people's charts
- Complete last two questions

Appendix 8.5.3: Stepwise Procedure One – Materialised Stage power point presentation

How to argue

Materialized Stage

Objectives

- To develop the skills of argument
- To use interactive exercises to develop skills

Define these words

- Argue
- Persuade
- Manipulate
- Debate

Developing an argument

- Plan: for and against
- Personal experience anecdote
- Attack – plan how to minimise it
- Conclude

‘The internet does more harm than good’

- Prepare and debate this issue in class

‘The internet does more harm than good’: planning

Yes, I agree (+ ve)	No, I disagree (-ve)

What do you believe?
decide (or pretend)

‘The internet does more harm than good’: personal experience

- Think of a personal anecdote (little story about yourself or a close friend that supports your view of the internet)

‘The internet does more harm than good’: attack

Take an opposite point of view

- – think through why that idea could be wrong
- - think why it could be illogical
- - think why it might be daft to believe it

Paragraph Structure: PEE

- Point: what is the point you are trying to get across – state it clearly
- Evidence: what evidence or reasons do you have to back up that point
- Explain: now clearly explain how your evidence emphasizes your point; explain why the point is relevant, explain why the evidence makes a difference to our understanding of the overall question.

Discourse markers

Add information	Contrast ideas	Compare similarities	Cause and effect	Emphasis

STARTING SENTENCES AND PARAGRAPHS WITH THESE WORDS TO SHOW HOW THE ARGUMENT PROGRESSES

‘The internet does more harm than good’: debate

- Choose your side: YES, it does more harm
- NO, it is and does good
- Prepare to argue for your side only
- Each pair to prepare a different argument
- Ensure your evidence is substantial

Reconsider the discourse markers which could have been used

Reconsider the discourse markers which could have been used

‘The internet does more harm than good’: conclude

- Summarize the best point
- Explain why the opposite idea is irrelevant
- Give reasons why your point of view is important to the future of human beings or life as we know it

‘The internet does more harm than good’: introduction

- Mentions time and place
- Include factual informationor statistics.
- Use discourse marker within paragraph
- Open to others ideas
- Refers to things in history

Gal'perin's step wise learning theory

1. Motivational stage – a preliminary introduction to the learner of the action and mobilization of the learning outcome
2. Orientating stage: construction of the orientating basis of the action (both general and complete)
3. Materialized stage – mastering the action using materials or physical objects
4. Stage of Overt speech – mastering the action using verbal sequencing
5. Stage of covert speech – mastering the action at the level of speaking to oneself
6. Mental stage – transferring the action to an automatic level

Orientating charts

Too many versions: need two or three choices at this stage.

Chart made by:	To be used by:
Vanessa and Jessie	9 students
Gilph	2 students
Claire and Mildred	1 student
Robin and Kim	1 student
Rosie and Zoe	2 students
Juan and Finn	2 students
Richard Jay and Jemma	2 students
Ferry	1 student
Naruto Alexa Monika	1 student
Robert and Lottie	1 student

Appendix 8.5.4: Stepwise Procedure Two power point presentation

Writing Essays 2

Objectives

- **To establish an understanding of the mechanics of argument essay writing**
- **To revise the orientating chart– to improve your essay writing process**

Motivation

Reasons for writing a better argument essay:

- Self-confidence
- General progress
- Skills development
- Future intentions

SCOBA 2

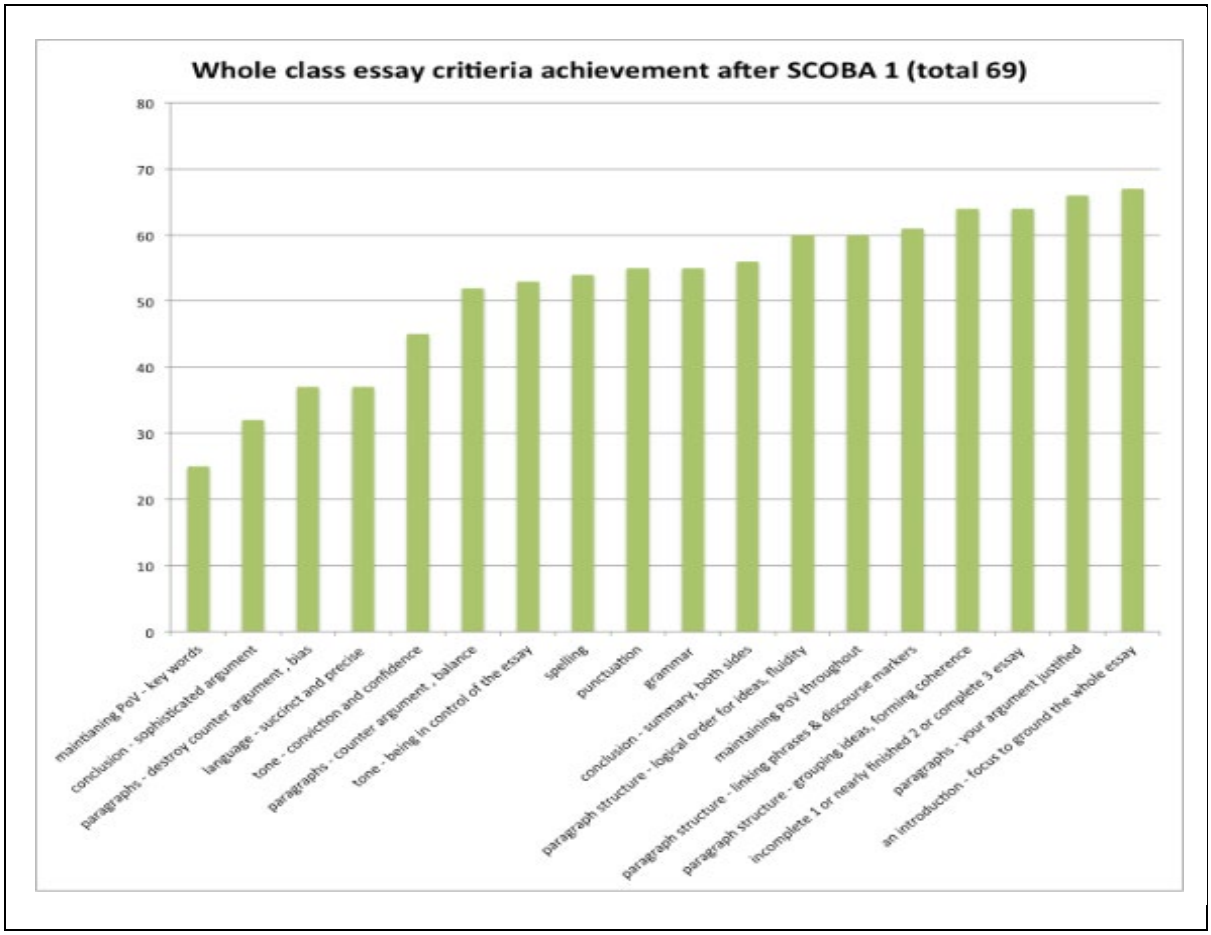
Scheme of complete orientating basis of the action

Means of the action and Objects of the action

- If we are going to write an improved essay, what will you need to complete the task?
- What objects orimplements or necessary knowledge will you need in order to improve on your last task?

Individual improvement: sections and sequence

- Look at the essay criteria and what you achieved after SCOBA 1
- Identify areas for improvement
- Identify objects, implements and knowledge you need to improve those areas.


Whole class essay critieria achievement after SCOBA 1 (total 69)
80
70
60
50
40
30
20
10
0
maintaining PoV - key words
conclusion - sophisticated argument
paragraphs - destroy counter argument , bias
language - succinct and precise
tone - conviction and confidence
paragraphs - counter argument , balance
tone - being in control of the essay
spelling
punctuation
grammar
conclusion - summary, both sides
paragraph structure - logical order for ideas, fluidity
maintaining PoV throughout
paragraph structure - linking phrases & discourse markers
paragraph structure - grouping ideas, forming coherence
incomplete 1 or nearly finished 2 or complete 3 essay
paragraphs - your argument justified
an introduction - focus to ground the whole essay

Class areas for improvement

- Maintaining POV using Key words
- Concluding using a sophisticated argument
- Destroy counter argument with bias
- Using succinct and precise language
- Developing a confident tone, sounding convincing

Expert argument essay 2

Deconstruct how the writer:

- Maintains POV using Key words
- Destroys counter argument with bias
- Uses succinct and precise language
- Develops a confident tone and sounds convincing
- Concludes using a sophisticated argument

Using Key words throughout essay to maintain POV

- Identify key words in essay title
- Create a list of synonyms to use throughout the essay.
- Ensure you refer to these key words in each paragraph

Identify synonyms

Mad	Arrogant

Destroys counter argument with bias

- Identify counter argument
- Attack this counter argument implying it is insubstantial

Reread paragraph 3

Counter argument destroyed

- As Trump ascends to the throne of godking of the US, the desire to call him "crazy" has taken hold. Armchair psychiatrists take to every media outlet to inform us that he's a madman and dangerously unhinged. However, this easy mantra is unhelpful. I don't deny that the Trump phenomenon is worse than previous presidential administrations, but it is recognisable; it is not insane.

Write your own: counter argument, use this template:

- Some people might think…
- However, this is an easy mantra.
- I don't deny that…but…

Confident and convincing tone; precise and succinct language

- Reduce waffle (Banal statements)
- Ensure you have clear points to make (plan)
- Ensure you support your points with evidence and reasoned justification
- Use active verbs, modal verbs and modifiers
- Use complex sentences to show advanced style

<table>
<tr><th>Modal Verbs</th><th colspan="2">Modifiers</th></tr>
<tr><td>▪Type of auxiliary or “helping” verb.

▪They combine with main verbs to express meanings such as ability, possibility, permission, obligation, and necessity.

▪Modal verbs can be used to express<u>subtlety</u> when questioning and exploring ideas

▪The principal modal verbs are can, could, may, might, must, should, and would. (Their negated forms are: cannot, couldn’t, mustn’t, shouldn’t)</td><td colspan="2">▪Modifiers aid the expression of certainty, possibility, perception and interpretation.

▪<u>modal verbs and modifiers are used to</u> discuss and write about <u>different interpretations / ideas</u></td></tr>
<tr><td></td><td>Almost
Certainly
Clearly
Consequently
In a sense
Necessarily
Often
Perhaps
Possibly
Definitely</td><td>Probably
Effectively
Essentially
Evidently
Immediately
In effect
In fact
Somewhat
Ultimately
Undoubtedly
Unquestionably</td></tr>
</table>

Active Verbs

seems	evokes	exhibits	Implies
argues	denotes	explains	Reinforces
clarifies	demonstrates	exaggerates	Signifies
connects	displays	indicates	Supports
criticises	highlights	portrays	underlines

Write a paragraph using modal verbs, active verbs and modifiers

- Homework is a threat to students' freedom

Now review a partial essay: 'Homework is a threat to students' freedom'

Find evidence of the following:

- Maintains POV using Key words
- Destroys counter argument with bias
- Uses succinct and precise language
- Develops a confident tone and sounds convincing

Look out for the Waffle

Conclusions
making a sophisticated point

Conclusions
making a sophisticated point

- Look at the three conclusions on the sheet. What similarities are there?
- What sophisticated devices do the writer's use to create a conclusion?

Conclusions include:

- Structure: discourse makers, reference back to first paragraph
- POV: reiterate your opinion using more emotive language or rule of three
- Consequences for future OR Spiritual truth

(love / death / hope / circle of life / power / disempowerment)

A sophisticated conclusion: try using complex sentences –

- Not only does this suggest….it also implies…
- Even though this creates a …. there is also
- Despite … the ….is emphasised by …

Orientating chart

The mechanics of the process

Redeveloping our orientating chart

- A cheat sheet
- A ‘terrible thing to look at’
- Remodel your orientating chart. You can remove or add items or ideas.

Redeveloping our orientating chart

1. Look at the chart you used to evaluate your use of the last orientating chart. Check the areas on the chart which you said at that point were helpful.
2. Delete anything you think is superfluous.
3. Highlight anything which is really importantand helped you write your last essay.
4. What else needs to be added?
5. Have we included everything on the essay criteria chart?

Any areas for teaching for progress and improvement?

- What do you want to practice?
- What areas do you personally still need help to improve?

Stage of Overt Speech

Talking through the essay plan in order to understand

Orientating chart template

- Elements to include: what sort of things should you include in this paragraph
- Suitable vocabulary: words or phrases to use when writing about the specific elements in the paragraph
- Sentence starters: phrases to get you going when you are writing the paragraph
- Other elements: anything not on the chart that you think you will need to write a perfect essay

Objective: recording your development

- To talk everyone through the essay structure completing the coloured blank
- To understand what goes in each section
- To ensure everyone has enough information to write an essay from this plan
- To use all the information you have been given previously: expert essays / orientating chart 1 / extra teaching on conclusions and counter argument

Reviewing your understanding of essay writing

Stage of Covert speech 1

Mastering the sequence for yourself

- Read the article about Zoos
- Fill in a blank essay template with examples from the article
- You will be writing an essay next week using an amalgamated template

This will help me pin point gaps in your understanding of essay construction. Then I can add more teaching next week before you write the essay.

Self-check your analysis

- Highlight similarities to the teacher analysis

Preparation for zoo essay

- Today gather facts, statistics and useful information to help you write an essay entitled:
- ‘Should we keep animals in zoos? Discuss’.

‘Should we keep animals in zoos? Discuss’.

Evaluating your essay writing

- 10 mins to check or finish essay
- Fill in evaluation form
- Recap on essays
- Recording two minute sound bite about essays

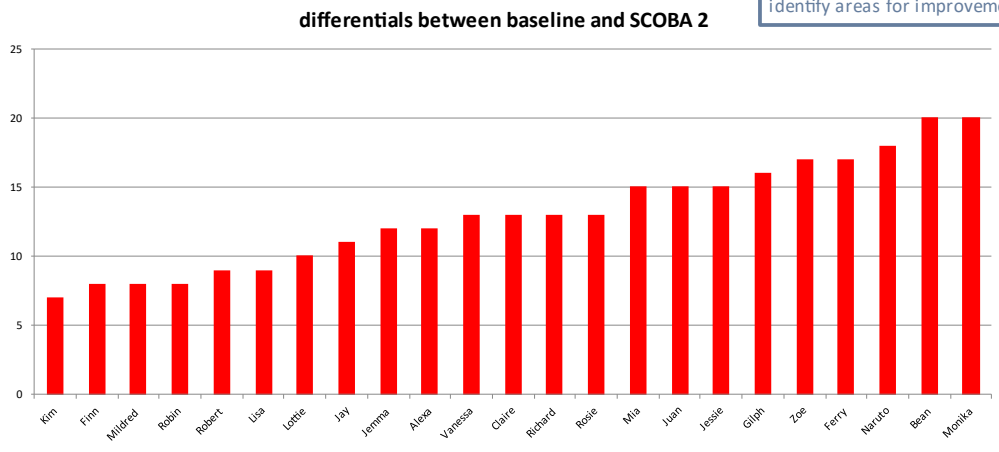
Appendix 8.5.5: CPD staff Reverse Modelling power point presentation

Reverse modelling

Helping students make more progress

Improvement over 5 months

Comparison of baseline to final piece of work. Enabled students to identify areas for improvement.



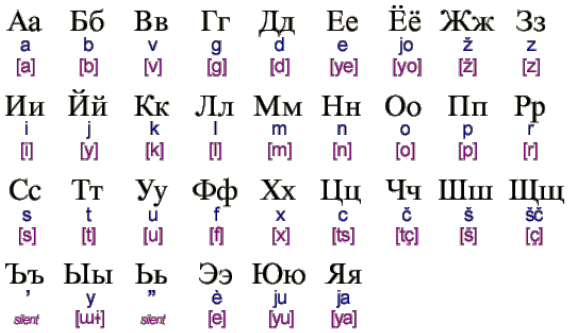
challenge

- Forget GCSEs / GCSE criteria / GCSE curriculum
- Think about your own **subject specialism.** What do students need to be able to do really well? Something, that if they could do it, would enable them to make progress in other areas too.
- Write an essay / write up an experiment / translate perfectly / use a formula / write a reflection or review

Write down a few ideas– you can revise these later

Gal'perin's Brilliant Mind Theory:

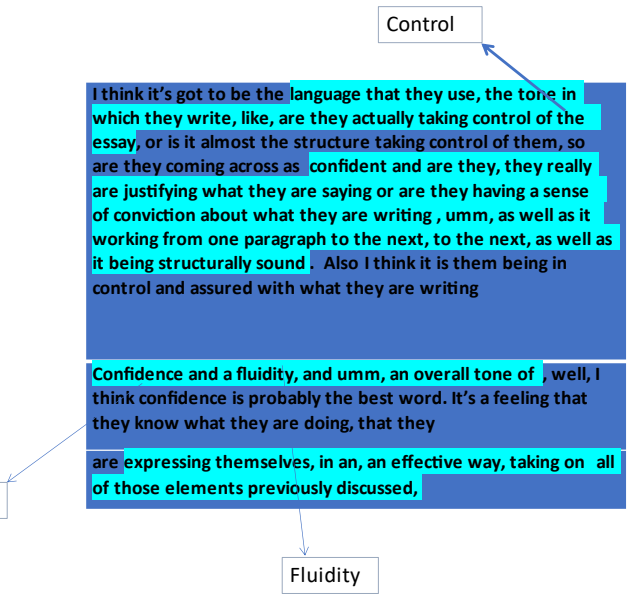
- Show students a perfect model
- Deconstruct perfect model with them and explain how it works
- Students deconstruct models and explain the elements or components
- Then they create a scaffold (orientating chart) to help them create that perfect model
- Finally, students create the model themselves using their own orientating chart



The students create this, with some teacher input, it generates deeper level of student understanding.

Our experience

- Important aspect of English: …An essay: non-fiction point of view essay.
- Our team talk What makes a good essay?
- (**not** GCSE criteria, but **our professional opinion**)



How do you teach confidence, control, fluidity?

Show students how the experts do it:

- Expert models

English Expert examples

Expert examples from 'The Guardian':

- 'Why the world needs Zoos';
- 'Children do not need both biological parents';
- 'Donald Trump: Not mad, but merely the arrogant boss we've all seen before';
- 'Computers Gossip: privacy versus digital identity';
- 'Let's drop the gender stereotypes, we are all non-binary'.

Introducing students to the academic language of my subject, to themes, ideas and concepts that they might be confronted with in the public exams.

Donald Trump: Not mad, but merely the arrogant boss we've all seen before

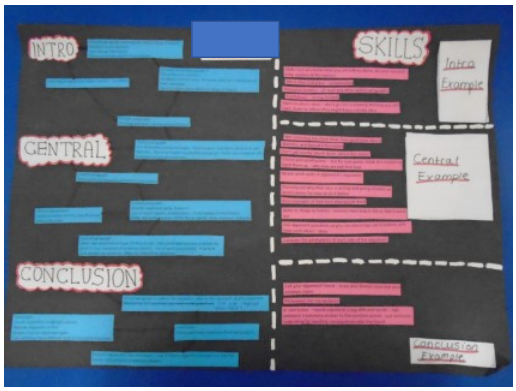
For millennia, entitled men have had their boorish behaviour rewarded. Far from insane, the US president is the epitome of a depressingly recognisable type.

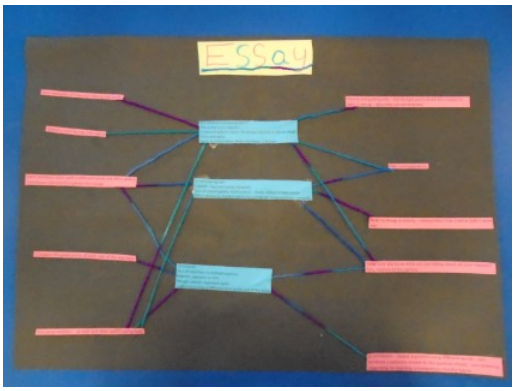
Many of us have a "terrible boss" story. My best is from a few years ago when I found myself in Afghanistan (before Isis emerged) with a tiny film crew working on an independent Kurdish film. Our director was an example of monumental arrogance and total ignorance combine in one person. He would often call for things like a "medium wide close up" (which is not a thing) and then get angry when asked for clarification. On one particularly memorable day, we found ourselves standing on top of a mountain in freezing conditions explaining that the sun was not the moon. The entire thing was so baffling to us, at turns both hilarious and utterly terrifying, that it seemed crazy and insane.

Steps

- Show them how the experts do it: Expert models
- Deconstruct the expert model – in paired work students identify the different elements
- Teacher helps them identifying other subtler elements within the expert model
- Students practice doing some of the more difficult elements (in pairs or groups)
- They create their own orientating chart (scaffold) so they can create a model like the expert
- Recreate the model for themselves

First orientating charts



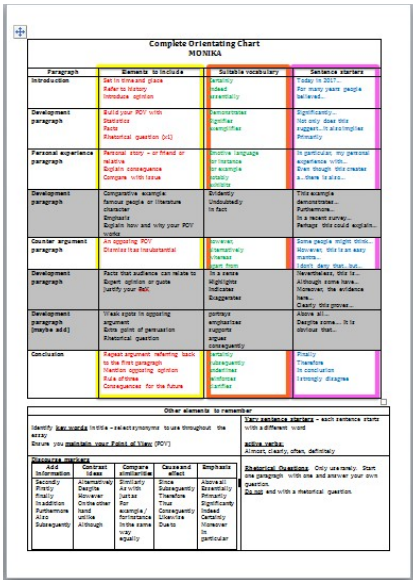


Student evaluation

- Evaluate what they have created alongside the perfect model; identifying areas for improvement
- Teacher can then teach to areas students are feeling less confident
- Students re-jig scaffold and recreate another one

Essay assessment Using orientating chart 2	
An introduction- focus to ground the whole essay	
Paragraph structure: Linking phrases discourse markers	
Paragraph structure: grouping ideas forming coherence	
Paragraph structure: logical order for ideas; fluidity	
Paragraphs: your argument justified	
Paragraphs: counter argument / balance	
Paragraphs: destroy counter argument / bias	
Conclusion: summary / both sides	
Conclusion: sophistication of argument	
Language: succinct, precise	
Tone: Conviction and Confidence	
Tone: of being in control of the essay	
Maintaining Point of view throughout	
Maintaining Point of view: Key words	
Spelling	
Punctuation	
Grammar	
Obvious use of orientating chart	
To improve:	

Second Orientating chart



Complete Orientating Chart
MONIKA

Paragraph	Elements to include	Suitable vocabulary	Sentence starters
Introduction	Set in time and place Refer to history Introduce opinion	certainly indeed essentially	Today in 2017... For many years people believed...
Development paragraph	Build your POV with Statistics Facts Rhetorical question (x1)	demonstrates Significat exemplifies	Significantly... Not only does this suggest...It also implies Primarily
Personal experience paragraph	Personal story - or friend or relative Explain consequence Compare with issue	Emotive language for instance for example clearly visible	In particular, my personal experience with... Even though this creates a...there is also...
Development paragraph	Comparative example famous people or literature character Emphasis Explain how and why your POV sides	Evidently undoubtedly In fact	This example demonstrates... Furthermore... In a recent survey... Perhaps this could explain...
Counter argument paragraph	An opposing POV Dismiss it as insubstantial	however alternatively Yet Apart from	Some people might think... Moreover, this is an easy mistake... I don't deny that...but...
Development paragraph	Facts that audience can relate to Expert opinion or quote Justify your POV.	In a sense Highlights Indicates Exaggerates	Nevertheless, this is... Although some have... Moreover, the evidence here... Clearly, this proves...
Development paragraph (maybe add)	Weak spots in opposing argument Extra point of persuasion Rhetorical question	portrays emphasises suggests argues consequently	Above all... Despite some... It is obvious that...
Conclusion	Repeat argument referring back to the first paragraph Mention opposing opinion Rule out flaws Consequences for the future	certainly subsequently underlines reinforces clarifies	Finally Therefore In conclusion I strongly disagree

Other elements to remember

Identify key words in title – select synonyms to use throughout the essay
Ensure you maintain your Point of View (POV)

Very sentence starters - each sentence starts with a different word

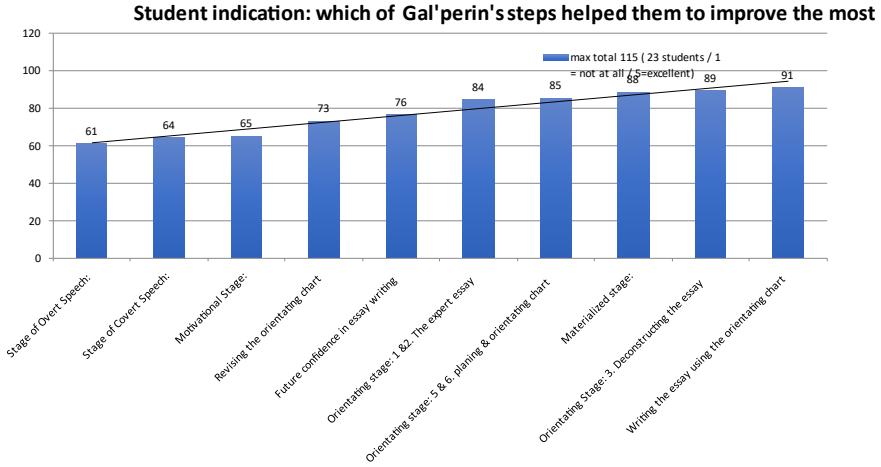
active verbs:
Almost, clearly, often, definitely

Sequence markers

Add information	Contrast idea	Compare similarities	Cause and effect	Emphasis
Secondly Firstly finally In addition Furthermore Also Subsequently	Alternatively Despite Moreover On the other hand unlike Although	Similarly As with Just as For example / for instance In the same way equally	Since Subsequently Therefore Thus Consequently Likewise Due to	Above all Essentially Primarily Significantly Indeed Certainly Moreover In particular

Rhetorical Questions Only use rarely. Start one paragraph with one and answer your own question.
Do not end with a rhetorical question.

Student evaluation



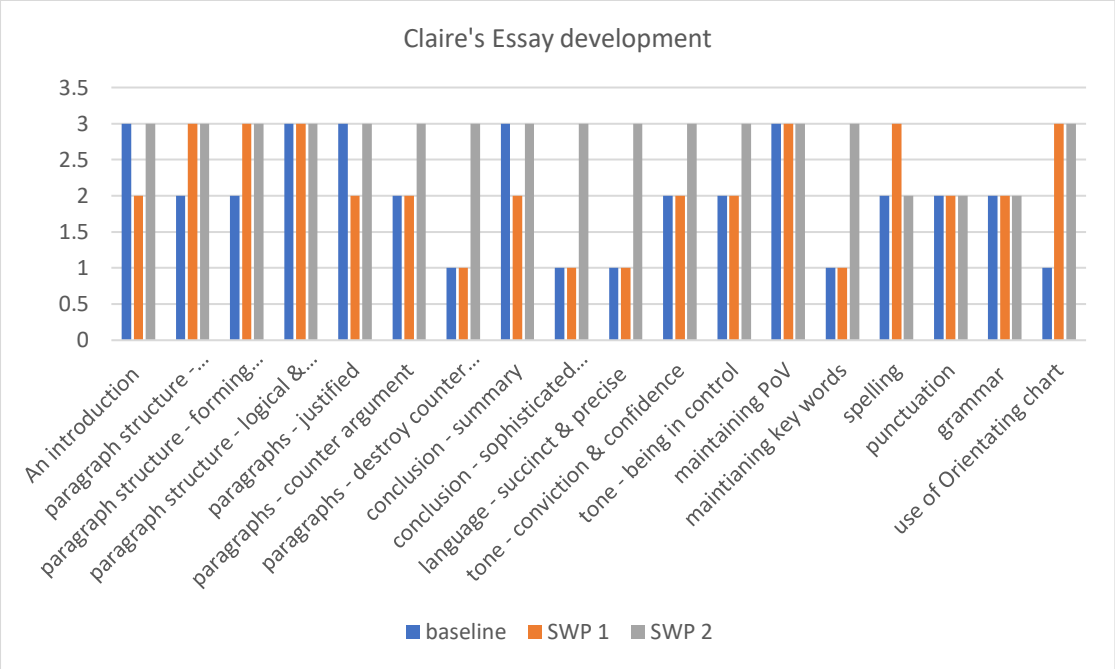
Task

- Now get into your faculty teams.
- As a subject specialist: Identify an area you think your students need to be able to do (regardless of GCSE criteria)
- Think about how you could introduce your students to an expert model of something within your subject specialism.
- Start your conversation about what that entails, detail students need to include. Ensure someone takes notes.
- Then before the Faculty meeting find examples of expert models of this area, so that at the meeting you can talk about and discuss how to implement this expert model into a series of lessons with one year group.

8.6 APPENDICES – GRAPHS AND CHARTS FROM THE CASE STUDIES

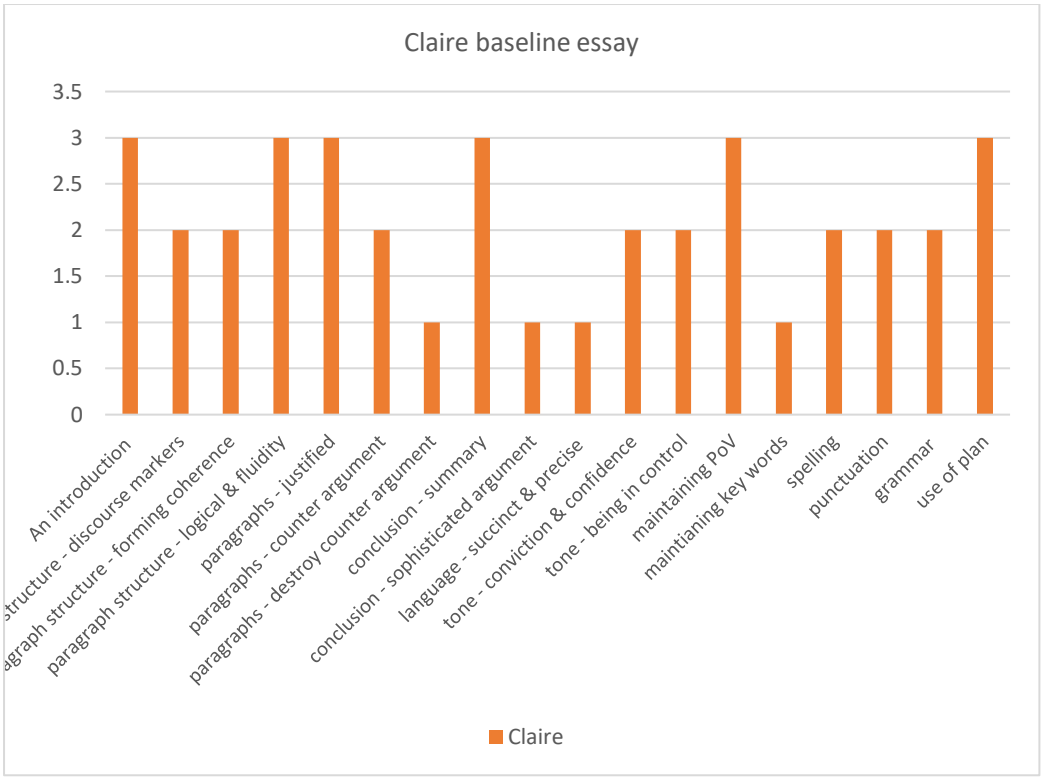
8.6.1

Graph showing Claire's essay development during the data collection period.



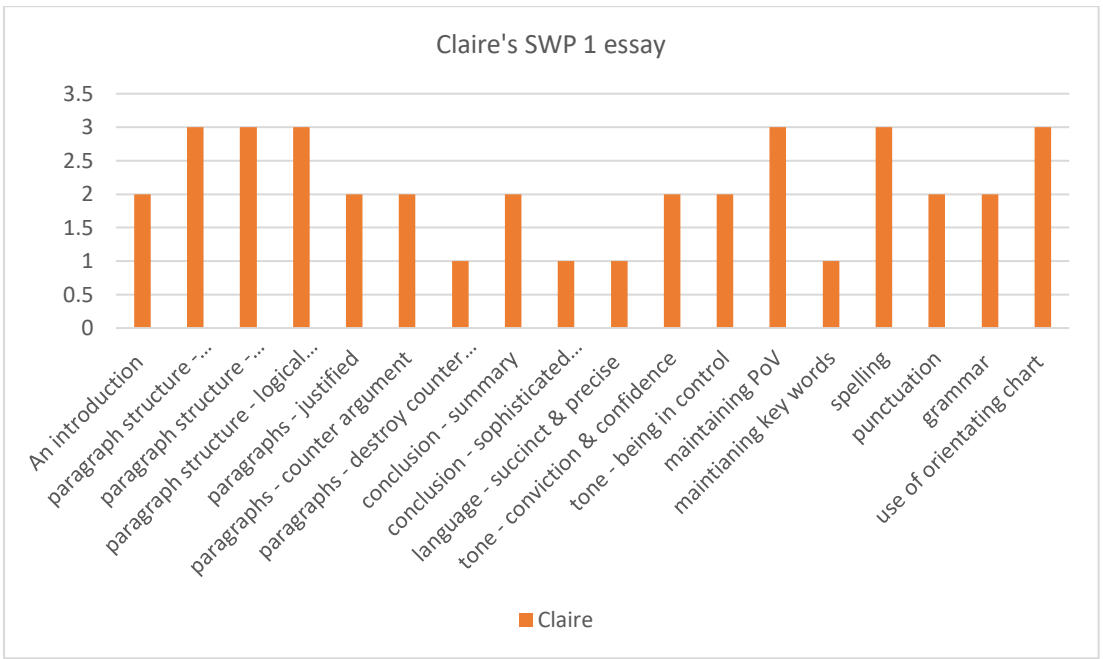
8.6.2

Assessment of Claire's Baseline essay, using the Essay criteria Assessment tool.



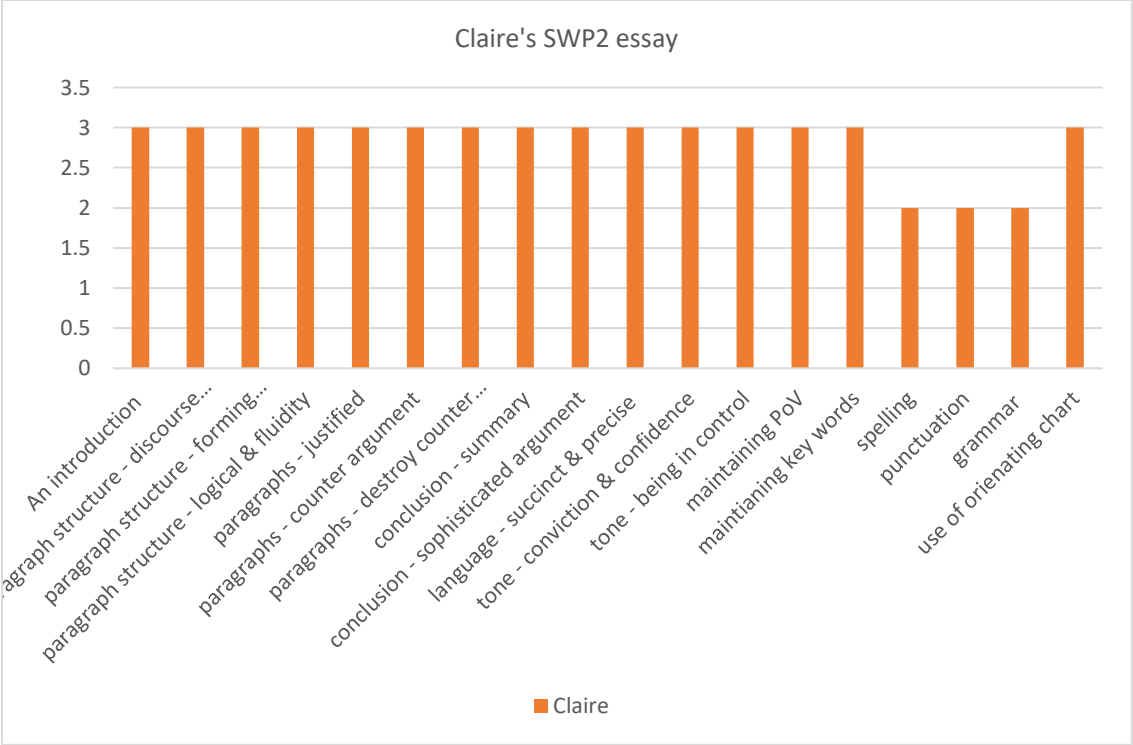
8.6.3

Claire's SWP1 essay assessed with the Essay criteria Assessment tool.



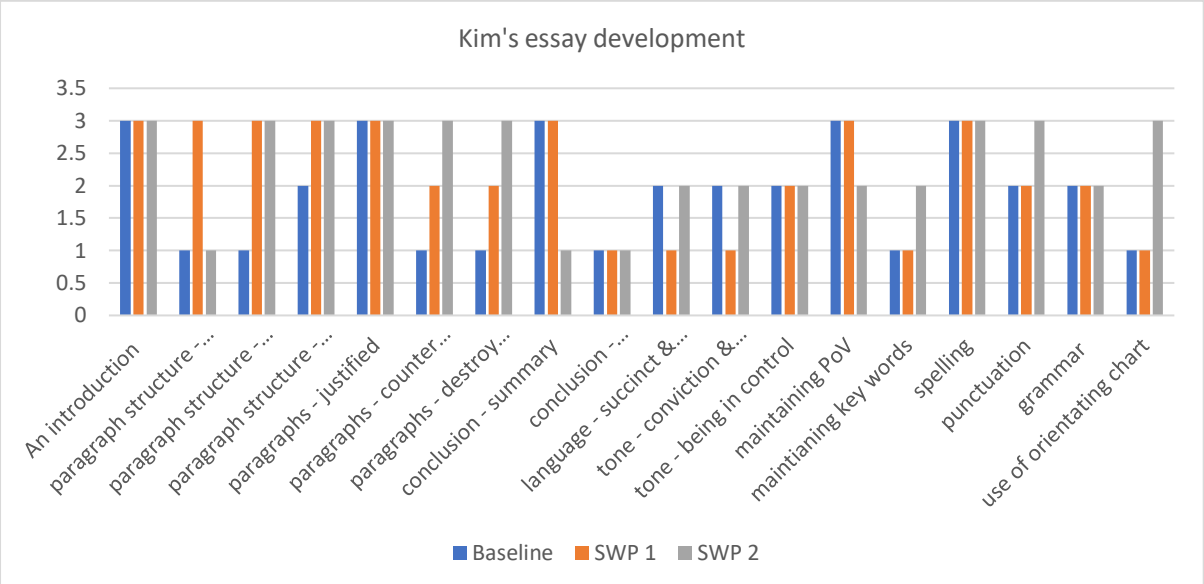
8.6.4

Claire's SWP2 achievement after assessment using the Essay criteria assessment tool.



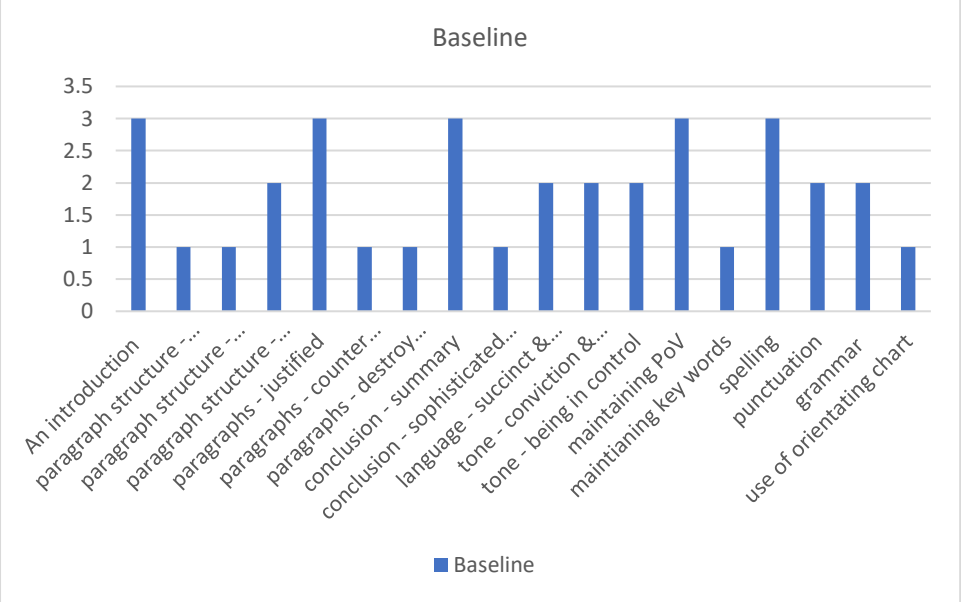
8.6.5

Essay criteria assessment tool showing Kim's progression in his essay writing during the data collection period



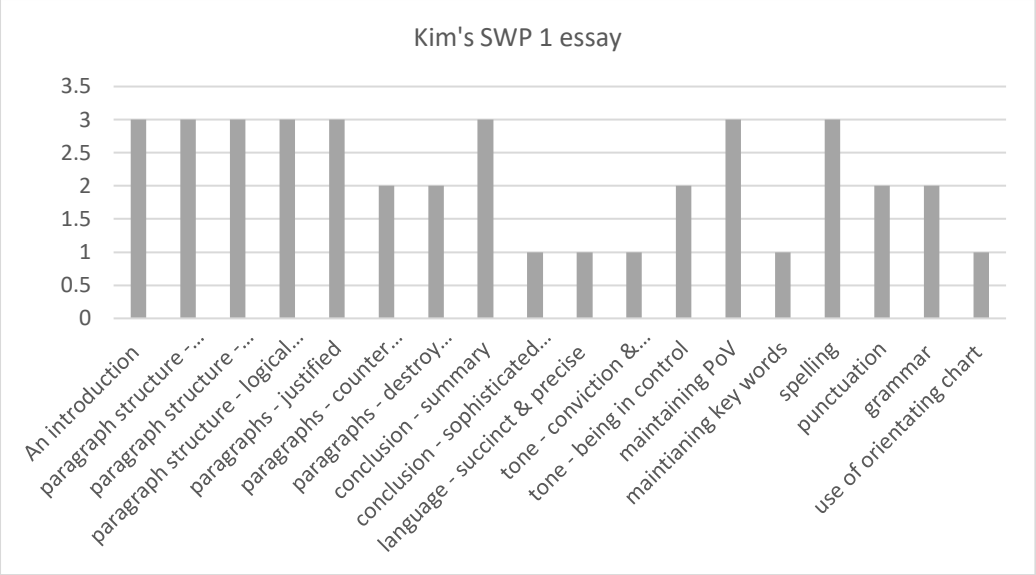
8.6.6

Graph showing Kim's achievement in the baseline essay using the Essay Criteria Assessment Tool.



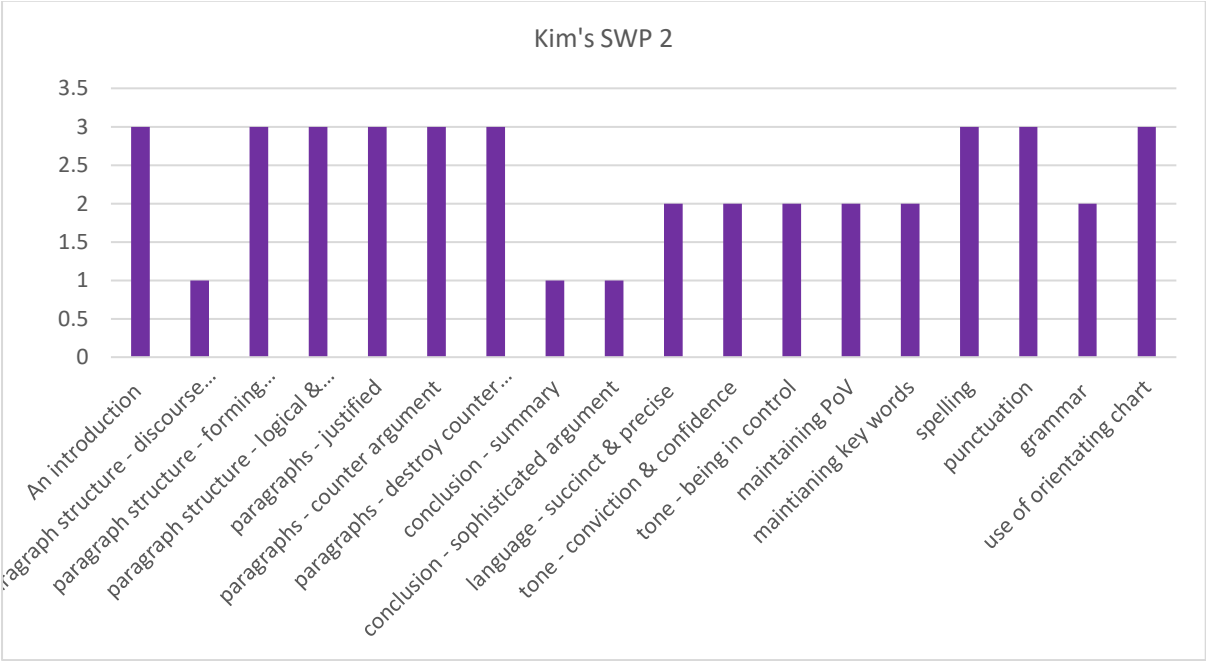
8.6.7

Kim's SWP One essay achievement as assessed by the Essay Criteria Assessment Tool.



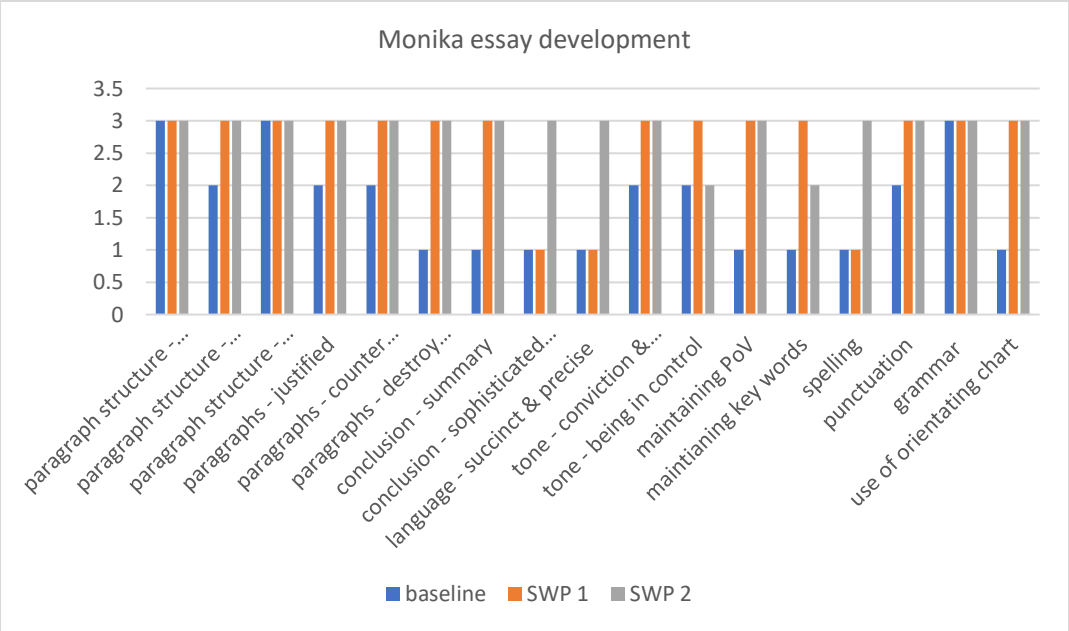
8.6.8

Graph showing Kim's achievement in his SWP2 essay according to the Essay Criteria Assessment Tool.



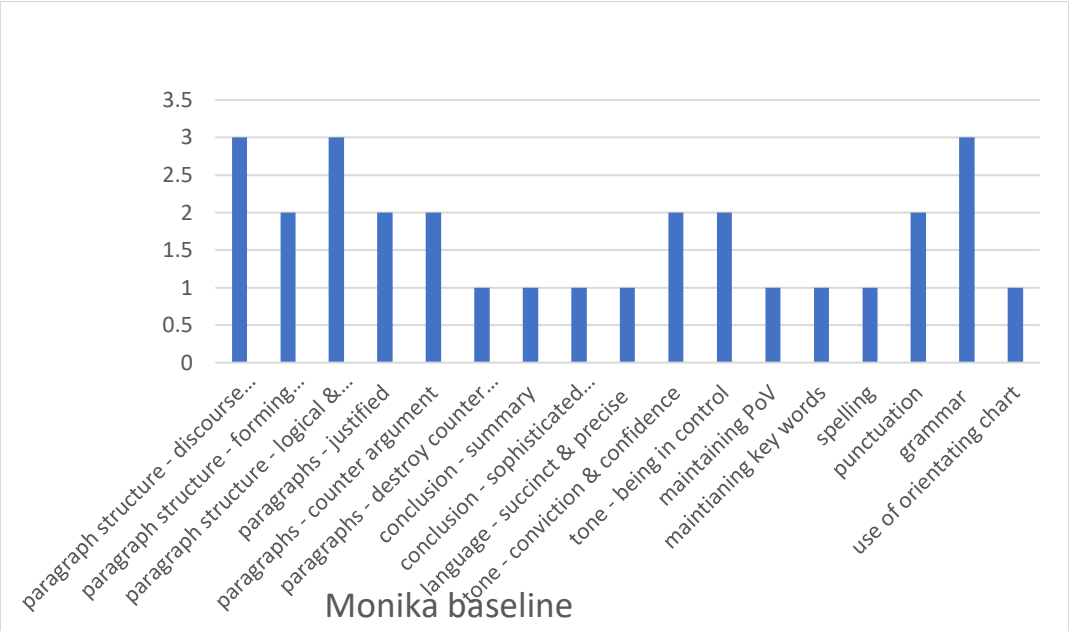
8.6.9

An overview of Monika's essay progression using the score from the Essay Criteria Assessment tool.



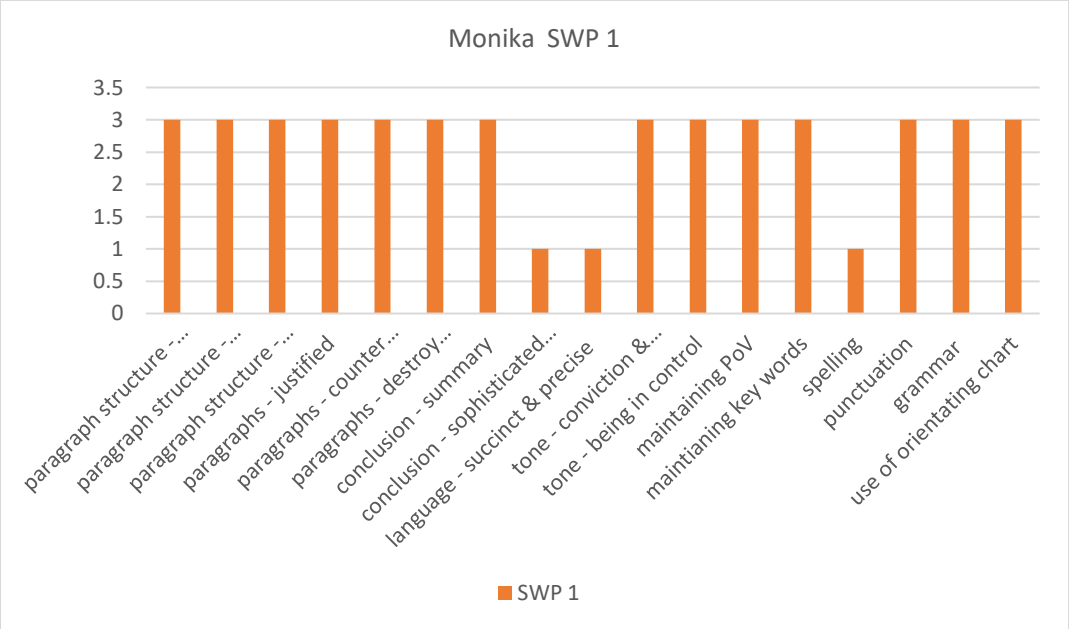
8.6.10

Monika's baseline essay achievement, as assessed using the essay criteria assessment tool



8.6.11

Monika's SWP 1 essay assessed with the Essay Criteria Assessment tool.



8.6.12

Monika's achievement for SWP 2 essay as assessed by the Essay Criteria Assessment Tool.